Miller Road east of IL Rte. 59, Dry-land Bridge; Phase II: Consultant Agreement

Accounts Payable (2) cert.
Transportation (2) cert.

STATE OF ILLINOIS)
) Agenda Item # 43
COUNTY OF LAKE)

COUNTY BOARD, LAKE COUNTY, ILLINOIS
REGULAR SEPTEMBER, A.D. 2008 SESSION
SEPTEMBER 09, A.D., 2008

MADAM CHAIR AND MEMBERS OF THE COUNTY BOARD:

A joint resolution authorizing the Chair of the County Board, the County Clerk and the County Engineer to execute an agreement between Lake County and Applied Technologies, Inc., Lake Villa, Illinois for the provision of Phase II engineering services *(Design Engineering)* for the proposed improvements to Miller Road *(County Highway 2)* consisting of a 3-spanned dry-land bridge 0.3 of a mile east of Illinois Route 59 in order to alleviate road flooding, at a maximum cost of services described of $578,530.71. This resolution appropriates $700,000.00 of County Bridge Tax funds for these engineering services designated as Section 08-00118-09-BR.

WE RECOMMEND adoption of this Resolution.

Public Works and Transportation Committee

	Aye	Nay
Chair	✓	
Vice-Chair		
	✓	
	✓	
	✓	
	✓	

Financial and Administrative Committee

	Aye	Nay
Chair	X	
Vice-Chair	✓	
	X	
	✓	
	-	

RESOLUTION

WHEREAS, Miller Road *(County Highway 2)* is a designated route on the county highway system; and

WHEREAS, it would be beneficial for the safety and welfare of the motoring public if that segment of Miller Road, 0.3 of a mile east of Illinois Rte. 59 could be elevated by the placement of a dry-land bridge with 3-spans to alleviate road flooding; and

WHEREAS, Preliminary Engineering studies have been completed; and

WHEREAS, it is advisable that a consultant engineering firm be employed to provide said Phase II engineering services *(Design Engineering)*; and

WHEREAS, Lake County by and through its Division of Transportation has selected a professional engineering services firm in accordance with the Local Government Professional Services Selection Act *(50 ILCS 510/1 et. seq.)*; and

WHEREAS, Applied Technologies, Inc., Lake Villa, Illinois, are consulting engineers skilled in the provision of said Phase II engineering services *(Design Engineering)*.

NOW, THEREFORE BE IT RESOLVED BY this County Board of Lake County, Illinois, that Applied Technologies, Inc., Lake Villa, Illinois, be employed to provide said Phase II engineering services *(Design Engineering)*, and that the Chair of the County Board, the County Clerk and the County Engineer of Lake County are authorized and they are directed to execute, on behalf of Lake County, an agreement for consultant engineering services between Lake County and Applied Technologies, Inc., Lake Villa, Illinois. The County Engineer shall transmit in writing the final agreement to be executed by the Chair of the Lake County Board and the County Clerk.

BE IT FURTHER RESOLVED that there is hereby appropriated $700,000.00 of County Bridge Tax funds for these engineering services designated as Section 08-00118-09-BR.

BE IT FURTHER RESOLVED that this agreement be administered in accordance with Chapter 605, Act 5, Section 5-205.2 of the Illinois Compiled Statutes without further Board action providing the final contract cost chargeable under the funds appropriated herein does not exceed the appropriation aforesaid.

Dated at Waukegan, Illinois
this 9th day of September 2008

Municipality	LOCAL AGENCY	Illinois Department of Transportation	CONSULTANT	Name: APPLIED TECHNOLOGIES, INC
Township				Address: 300 North Milwaukee Ave, Ste E
County: Lake County – Division of Transportation		**Preliminary Engineering Services Agreement For Non-Motor Fuel Tax Funds**		City: Lake Villa
Section: 08-00118-09-BR				State: IL

THIS AGREEMENT is made and entered into this _____ day of _____, 2008 between the above Local Agency (LA) and Consultant (ENGINEER) and covers certain professional engineering services in connection with the improvement of the above SECTION. Non-Motor Fuel Tax Funds, allotted to the LA ~~by the State of Illinois~~, under the general supervision of the State Department of Transportation, hereinafter called the "DEPARTMENT", will be used entirely ~~or in part~~ to finance ENGINEERING services as described under AGREEMENT PROVISIONS.

Section Description

Name Miller Road Bridge Improvement Project

Route _____ Length 0.28 Mi. 1475 FT (Structure No. _____)

Termini _____

Description:
Miller Road reconstruction with dry land and 3-span concrete slab bridges to alleviate flooding from 0.3 mi east of Route 59

Agreement Provisions

The Engineer Agrees,

1. To perform or be responsible for the performance of the following engineering services for the LA, in connection with the proposed improvements herein before described, and checked below:
   - a. ☒ Make such detailed surveys as are necessary for the preparation of detailed roadway plans
   - b. ☒ Make stream and flood plain hydraulic surveys and gather high water data, and flood histories for the preparation of detailed bridge plans.
   - c. ☒ Make or cause to be made such soil surveys or subsurface investigations including borings and soil profiles and analyses thereof as may be required to furnish sufficient data for the design of the proposed improvement. Such investigations are to be made in accordance with the current requirements of the DEPARTMENT.
   - d. ☐ Make or cause to be made such traffic studies and counts and special intersection studies as may be required to furnish sufficient data for the design of the proposed improvement.
   - e. ☒ Prepare Army Corps of Engineers Permit, **Lake County Stormwater Management Commission Permit**, Department of Natural Resources-Office of Water Resources Permit, Bridge waterway sketch, and/or Channel Change sketch, Utility plan and locations, and Railroad Crossing work agreements.
   - f. ☒ Prepare Preliminary Bridge design and Hydraulic Report, (including economic analysis of bridge or culvert types) and high water effects on roadway overflows and bridge approaches.
   - g. ☒ Make complete general and detailed plans, special provisions, proposals and estimates of cost and furnish the LA with **one (1) copy of each document in both hardcopy and electronic format**. Additional copies of any or all documents, if required, shall be furnished to the LA by the ENGINEER at his actual cost for reproduction.
   - h. ☒ Furnish the LA with survey and drafts in **duplicate** of all necessary right-of-way dedications, construction easement and borrow pit and channel change agreements including prints of the corresponding plats and staking as required.
   - i. ☐ Assist the LA in the tabulation and interpretation of the contractors' proposals

DRAFT

j. ☒ Prepare the necessary environmental documents in accordance with the procedures adopted by the DEPARTMENT's Bureau of Local Roads & Streets.

k. ☐ Prepare the Project Development Report when required by the DEPARTMENT.

2. That all reports, plans, plats and special provisions to be furnished by the ENGINEER pursuant to the AGREEMENT, will be in accordance with current standard specifications and policies **of the LA** ~~of the DEPARTMENT~~. It is being understood that all such reports, plats, plans and drafts shall, before being finally accepted, be subject to approval by the LA ~~and the DEPARTMENT~~.

3. To attend conferences at any reasonable time when requested to do so by representatives of the LA ~~or the Department~~.

4. In the event plans or surveys are found to be in error during construction of the SECTION and revisions of the plans or survey corrections are necessary, the ENGINEER agrees that he will perform such work without expense to the LA, even though final payment has been received by him. He shall give immediate attention to these changes so there will be a minimum delay to the Contractor.

5. That basic survey notes and sketches, charts, computations and other data prepared or obtained by the Engineer pursuant to this AGREEMENT will be made available, upon request, to the LA ~~or the DEPARTMENT~~ without cost and without restriction or limitations as to their use.

6. That all plans and other documents furnished by the ENGINEER pursuant to this AGREEMENT will be endorsed by him and will show his professional seal where such is required by law.

The LA Agrees,

1. To pay the ENGINEER as compensation for all services performed as stipulated in paragraphs 1a, 1g, 1i, 2, 3, 5 and 6 in accordance with one of the following methods indicated by a check mark:

   a. ☐ A sum of money equal to _____ percent of the awarded contract cost of the proposed improvement as approved by the DEPARTMENT.

   b. ☐ A sum of money equal to the percent of the awarded contract cost for the proposed improvement as approved by the DEPARTMENT based on the following schedule:

Schedule for Percentages Based on Awarded Contract Cost

Awarded Cost	Percentage Fees
Under $50,000	_____ (see note)
	_____ %
	_____ %
	_____ %

Note: Not necessarily a percentage. Could use per diem, cost-plus or lump sum.

2. To pay for services stipulated in paragraphs 1b, 1c, 1d, 1e, 1f, 1h, 1j & 1k of the ENGINEER AGREES at actual cost of performing such work plus performing such work plus 146.38 percent to cover profit, overhead and readiness to serve - "actual cost" being defined as material cost plus payrolls, insurance, social security and retirement deductions. Traveling and other out-of-pocket expenses will be reimbursed to the ENGINEER at his actual cost. Subject to the approval of the LA, the ENGINEER may sublet all or part of the services provided under the paragraph 1b, 1c, 1d, 1e, 1f, 1h, 1j & 1k. If the ENGINEER sublets all or part of this work, the LA will pay the cost to the ENGINEER plus a five (5) percent service charge.

"Cost to Engineer" to be verified by furnishing the LA ~~and the DEPARTMENT~~ copies of invoices from the party doing the work. The classifications of the employees used in the work should be consistent with the employee classifications for the services performed. If the personnel of the firm, including the Principal Engineer, perform routine services that should normally be performed by lesser-salaried personnel, the wage rate billed for such services shall be commensurate with the work performed.

The Total Not-to-Exceed Contract Amount shall be $578,530.71

3. That payments due the ENGINEER for services rendered in accordance with this AGREEMENT will be made as soon as practicable after the services have been performed in accordance with the following schedule:

   a. Upon completion of detailed plans, special provisions, proposals and estimate of cost - being the work required by paragraphs 1a through 1g under THE ENGINEER AGREES - to the satisfaction of the LA ~~and their approval by the DEPARTMENT~~, 90 percent of the total fee due under this AGREEMENT based on the approved estimate of cost.

   b. Upon award of the contract for the improvement by the LA ~~and its approval by the DEPARTMENT~~, 100 percent of the total fee due under the AGREEMENT based on the awarded contract cost, less any amounts paid under "a" above.

   By Mutual agreement, partial payments, not to exceed 90 percent of the amount earned, may be made from time to time as the work progresses.

4. That, should the improvement be abandoned at any time after the ENGINEER has performed any part of the services provided for in paragraphs 1a, through 1h and prior to the completion of such services, the LA shall reimburse the ENGINEER for his actual costs plus 146.38 percent incurred up to the time he is notified in writing of such abandonment - "actual cost" being defined as in paragraph 2 of THE LA AGREES.

5. That, should the LA require changes in any of the detailed plans, specifications or estimates except for those required pursuant to paragraph 4 of THE ENGINEER AGREEs, ~~after they have been approved by the DEPARTMENT~~, the LA will pay the ENGINEER for such changes on the basis of actual cost plus 146.38 percent to cover profit, overhead and readiness to serve -"actual cost" being defined as in paragraph 2 of THE LA AGREES. It is understood that "changes" as used in this paragraph shall in no way relieve the ENGINEER of his responsibility to prepare a complete and adequate set of plans and specifications.

It is Mutually Agreed,

1. That any difference between the ENGINEER and the LA concerning their interpretation of the provisions of this Agreement shall be referred to a committee of disinterested parties consisting of one member appointed by the ENGINEER, one member appointed by the LA and a third member appointed by the two other members for disposition and that the committee's decision shall be final.

2. This AGREEMENT may be terminated by the LA upon giving notice in writing to the ENGINEER at his last known post office address. Upon such termination, the ENGINEER shall cause to be delivered to the LA all surveys, permits, agreements, preliminary bridge design & hydraulic report, drawings, specifications, partial and completed estimates and data, if any from traffic studies and soil survey and subsurface investigations with the understanding that all such material becomes the property of the LA. The ENGINEER shall be paid for any services completed and any services partially completed in accordance with Section 4 of THE LA AGREES.

3. That if the contract for construction has not been awarded one year after the acceptance of the plans by the LA ~~and their approval by the DEPARTMENT~~, the LA will pay the ENGINEER the balance of the engineering fee due to make 100 percent of the total fees due under this AGREEMENT, based on the estimate of cost as prepared by the ENGINEER and approved by the LA ~~and the DEPARTMENT~~.

4. That the ENGINEER warrants that he/she has not employed or retained any company or person, other than a bona fide employee working solely for the ENGINEER, to solicit or secure this contract, and that he/she has not paid or agreed to pay any company or person, other than a bona fide employee working solely for the ENGINEER, any fee, commission, percentage, brokerage fee, gifts or any other consideration, contingent upon or resulting from the award or making of this contract. For Breach or violation of this warranty the LA shall have the right to annul this contract without liability.

IN WITNESS WHEREOF, the parties have caused the AGREEMENT to be executed in quadruplicate counterparts, each of which shall be considered as an original by their duly authorized officers.

Executed by the LA:

County of Lake of the
(~~Municipality/Township~~/County)

ATTEST:

State of Illinois, acting by and through its

By _____

_____

Lake County Clerk

By _____

(Seal)

Title Chairman of the County Board

RECOMMENDED FOR EXECUTION

_____
Martin G. Buehler, P.E.
Director of Transportation/County Engineer
Lake County

Executed by the ENGINEER:

Engineering Firm
APPLIED TECHNOLOGIES, INC.

ATTEST:

Street Address
300 North Milwaukee Ave, Suite E

City, State
Lake Villa, Illinois 60046

By _____

By _____

Title President

Title Vice President

Note: Three (3) Original Executed Contracts – (2) LCDOT; (1) Consultant

DF-824-039
REV 12/04

PAYROLL ESCALATION TABLE
FIXED RAISES

FIRM NAME APPLIED TECHNOLOGIES, INC.
PRIME/SUPPLEMENT SUPPLEMENT 2008

DATE 08/21/08
PTB NO. 08-00118-09-BR

CONTRACT TERM	23 MONTHS	OVERHEAD RATE	146.38%
START DATE	10/1/2008	COMPLEXITY FACTOR	0
RAISE DATE		% OF RAISE	3.00%

ESCALATION PER YEAR

10/1/2008 - 1/1/2009	1/2/2009 - 1/1/2010	1/2/2010 - 9/1/2010		
3 / 23	12 / 23	8 / 23		
= 13.04%	53.74%	36.90%		
= 1.0368				

The total escalation for this project would be: 3.68%

Bureau of Design and Environment

Printed 8/21/2008 10:12 AM

PAYROLL RATES

FIRM NAME APPLIED TECHNOLOGI
PRIME/SUPPLEMENT SUPPLEMENT 2008
SECTION 08-00118-09-BR

DATE 08/21/08

ESCALATION FACTOR 3.68%

CLASSIFICATION	CURRENT RATE	CALCULATED RATE
PRINCIPAL	$70.00	$70.00
PROJ MANAGER	$45.12	$46.78
SR ENGINEER	$36.63	$37.98
PROJ ENGINEER	$28.46	$29.51
SR TECHNICIAN	$38.80	$40.23
TECHNICIAN	$22.50	$23.33
ADMINISTRATION	$27.45	$28.46
		$0.00
		$0.00
		$0.00
		$0.00
		$0.00
		$0.00
		$0.00
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		$0.00
		$0.00
		$0.00
		$0.00
		$0.00

Subconsultants

FIRM NAME APPLIED TECHNOLOGIES, INC. DATE 08/21/08
PRIME/SUPPLEMENT SUPPLEMENT 2008
PSB NO. 08-00118-09-BR

NAME	Direct Labor Total	Contribution to Prime Consultant
GILES ENGINEERING ASSOCIATES	29,627.50	3,555.30
HEY AND ASSOCIATES	19,400.00	2,328.00
HOWARD SURVEYING	3,200.00	384.00
		0.00
		0.00
		0.00
		0.00
		0.00
Total	52,227.50	6,267.30

COST PLUS FIXED FEE
COST ESTIMATE OF CONSULTANT SERVICES

DF-824-039
REV 12/04

FIRM: APPLIED TECHNOLOGIES, INC.
PSB: 08-00118-09-BR
PRIME/SUPPLEMENT: SUPPLEMENT 2008
DATE:
OVERHEAD RATE: 1.4638
COMPLEXITY FACTOR: 0

DBE DROP BOX	ITEM	MANHOURS (A)	PAYROLL (B)	OVERHEAD & FRINGE BENF (C)	DIRECT COSTS (D)	FIXED FEE (E)	Costs (F)	SERVICES BY OTHERS (G)	DBE TOTAL (H)	TOTAL (B-G)
	Survey	26	897.92	1,314.37		320.83		3,200.00		5,733.12
	Geotechnical	14	515.43	754.49		184.16		29,627.50		31,081.58
	Environmental Assessment	16	478.02	699.73		170.80		19,400.00		20,748.55
	Hydraulic Calcs Revision	58	1,928.00	2,822.21		688.87				5,439.08
	Preliminary Road Plans	233	7,644.70	11,190.31	3,322.50	2,731.45				24,888.95
	TSL Dry Land Bridge	518	17,191.80	25,165.36		6,142.63				48,499.79
	TSL 3-Span Bridge	153	5,884.25	8,613.36		2,102.44				16,600.04
	Prefinal Road Plans	582	19,137.88	28,014.04	5,289.50	6,837.97				59,279.39
	Prefinal Dry Land Bridge	1705	62,096.24	90,896.47		22,186.99				175,179.70
	Prefinal 3-Span Bridge	567	21,209.67	31,046.72		7,578.22				59,834.60
	Final Road Plans	293	9,618.10	14,078.97	4,804.50	3,436.55				31,938.11
	Final Dry Land Bridge	364	13,424.83	19,651.26		4,796.69				37,872.77
	Final 3-Span Bridge	145	5,406.79	7,914.46		1,931.85				15,253.09
	PS&E	55	1,682.35	2,462.62	2,162.50	601.10				6,908.57
	QC/QA	32	2,184.76	3,198.05		780.62				6,163.43
	Administration/Management	54	3,780.00	5,533.16		1,350.59				10,663.76
	Construction Related Services	200	7,956.53	11,646.77		2,842.87				22,446.16
	Subconsultant DL									
	TOTALS	5015	181,037.26	265,002.34	15,579.00	70,951.91	0.00	52,227.50	0.00	**578,530.71**

PREPARED BY ATI

AVERAGE HOURLY PROJECT RATES

FIRM APPLIED TECHNOLOGIES, INC.
PSB 08-00118-09-BR
PRIME/SUPPLEMENT SUPPLEMENT 2008

DATE 08/21/08

SHEET 1 OF 5

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJECT RATES			Survey			Geotechnical			Environmental Assessment			Hydraulic Calcs Revision			Preliminary Road Plans		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
PRINCIPAL	70.00	349	6.96%	4.87										2	3.45%	2.41	3	1.29%	0.90
PROJ MANAGER	46.78	644	12.84%	6.01	2	7.69%	3.60	2	14.29%	6.68							4	1.72%	0.80
SR ENGINEER	37.98	1184	23.61%	8.97	2	7.69%	2.92	8	57.14%	21.70	4	25.00%	9.49	16	27.59%	10.48	80	34.33%	13.04
PROJ ENGINEER	29.51	1415	28.22%	8.33	2	7.69%	2.27	4	28.57%	8.43	2	12.50%	3.69	40	68.97%	20.35	64	27.47%	8.11
SR TECHNICIAN	40.23	370	7.38%	2.97	12	46.15%	18.57				2	12.50%	5.03				22	9.44%	3.80
TECHNICIAN	23.33	993	19.80%	4.62	8	30.77%	7.18				8	50.00%	11.66				53	22.75%	5.31
ADMINISTRATION	28.46	60	1.20%	0.34													7	3.00%	0.86
		0																	
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TOTALS		5015	100%	$36.10	26	100.00%	$34.54	14	100%	$36.82	16	100%	$29.88	58	100%	$33.24	233	100%	$32.81

PREPARED BY ATI

AVERAGE HOURLY PROJECT RATES

FIRM APPLIED TECHNOLOGIES, INC.
PSB 08-00118-09-BR
PRIME/SUPPLEMENT SUPPLEMENT 2008

DATE 08/21/08

SHEET 2 **OF** 5

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TSL Dry Land Bridge			TSL 3-Span Bridge			Prefinal Road Plans			Prefinal Dry Land Bridge			Prefinal 3-Span Bridge			Final Road Plans		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
PRINCIPAL	70.00	26	5.02%	3.51	16	10.46%	7.32	9	1.55%	1.08	106	6.22%	4.35	42	7.41%	5.19	4	1.37%	0.96
PROJ MANAGER	46.78	52	10.04%	4.70	28	18.30%	8.56	9	1.55%	0.72	299	17.54%	8.20	106	18.69%	8.75	5	1.71%	0.80
SR ENGINEER	37.98	64	12.36%	4.69	31	20.26%	7.70	200	34.36%	13.05	364	21.35%	8.11	120	21.16%	8.04	100	34.13%	12.96
PROJ ENGINEER	29.51	124	23.94%	7.06	45	29.41%	8.68	159	27.32%	8.06	515	30.21%	8.91	175	30.86%	9.11	80	27.30%	8.06
SR TECHNICIAN	40.23	55	10.62%	4.27	10	6.54%	2.63	55	9.45%	3.80	108	6.33%	2.55	40	7.05%	2.84	28	9.56%	3.84
TECHNICIAN	23.33	189	36.49%	8.51	21	13.73%	3.20	133	22.85%	5.33	309	18.12%	4.23	80	14.11%	3.29	67	22.87%	5.33
ADMINISTRATION	28.46	8	1.54%	0.44	2	1.31%	0.37	17	2.92%	0.83	4	0.23%	0.07	4	0.71%	0.20	9	3.07%	0.87
TOTALS		518	100%	$33.19	153	100%	$38.46	582	100%	$32.88	1705	100%	$36.42	567	100%	$37.41	293	100%	$32.83

PREPARED BY ATI

AVERAGE HOURLY PROJECT RATES

FIRM APPLIED TECHNOLOGIES, INC.
PSB 08-00118-09-BR
PRIME/SUPPLEMENT SUPPLEMENT 2008

DATE 08/21/08

SHEET 3 **OF** 5

PAYROLL CLASSIFICATION	AVG HOURLY RATES	Final Dry Land Bridge			Final 3-Span Bridge			PS&E			QC/QA			Administration/Management			Construction Related Services		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
PRINCIPAL	70.00	26	7.14%	5.00	11	7.59%	5.31				30	93.75%	65.63	54	100.00%	70.00	20	10.00%	7.00
PROJ MANAGER	46.78	70	19.23%	9.00	26	17.93%	8.39				1	3.13%	1.46				40	20.00%	9.36
SR ENGINEER	37.98	65	17.86%	6.78	30	20.69%	7.86	19	34.55%	13.12	1	3.13%	1.19				80	40.00%	15.19
PROJ ENGINEER	29.51	105	28.85%	8.51	44	30.34%	8.95	16	29.09%	8.58							40	20.00%	5.90
SR TECHNICIAN	40.23	27	7.42%	2.98	10	6.90%	2.77	1	1.82%	0.73									
TECHNICIAN	23.33	67	18.41%	4.29	20	13.79%	3.22	18	32.73%	7.63							20	10.00%	2.33
ADMINISTRATION	28.46	4	1.10%	0.31	4	2.76%	0.79	1	1.82%	0.52									
TOTALS		364	100%	$36.88	145	100%	$37.29	55	100%	$30.59	32	100%	$68.27	54	100%	$70.00	200	100%	$39.78

BREAKDOWN OF ROADWAY PERSON-HOURS

DESIGN

Firm	APPLIED TECHNOLOGIES, INC.	Date	08/19/08
Route	Miller Road		
Section	08-00118-09-BR		
County	Lake		
Job No.	-		
Project	Miller Road Improvement		

Tasks	Proj. Princ.	Proj. Mgr.	Sr. Engr.		Proj. Engr.	Sr. Tech.	Tech.	Admin.		Total Hours	% Hours by Task
Hydraulic Calcs Revision											
Rerun hydraulic calcs - revised profile/BFE	2		16		40					58	4.26%
										0	0.00%
										0	0.00%
Total Hydraulic Calcs Revision	2	0	16	0	40	0	0	0	0	58	
Roadway Design											
Cover Sheet - revisions		1	4		2		4			11	0.81%
General Notes and Summary of Quantities	1	4	20		20	8	16			69	5.06%
Schedule of Quantities			24		18	8	16			66	4.84%
Typical Sections - revised & new		1	16		16	6	14			53	3.89%
One sheet - proposed typical section & legend (includes existing as dashed). Pavement design - design by LCDOT.											
Erosion Control Plan			32		16	12	24			84	6.16%
Stormwater Runoff Management Plan											
Traffic Control Plan			24		16	4	12	8		64	4.70%
Detour Plan			16		8	8	16			48	3.52%
Plan & Profile	2	4	24		16	8	16			64	4.70%
English Units. Scale 1" = 50' horizontal & 1" = 5' vertical. Quantity takeoffs. Engineers design/draft using Geopak design software.			20		20	8	16			70	5.14%
Cross Sections			24		24	16	24			88	6.46%
Length of project approx 1,500'; provide cross sections at 50' intervals plus at structure & entrances = 35 cross sections.											
LCDOT Details			8		8		4			20	1.47%
IDOT Details			8		8		4			20	1.47%
Pavement Marking Plan			12		8	4	12			36	2.64%
Landscaping			12		8	4	12			36	2.64%
Sediment Basin Plan and Details			12		8	8	16			44	3.23%
Special Provisions			24		12			16		52	3.82%
Check list by ATI; unique portions by ATI.											
Estimate of Time			2		12					14	1.03%
Estimate of Cost (Engineer's Estimate)		2	8		8					18	1.32%
Plat of Highways											
- Right-of-way Plat											
- ROW and Easement Descriptions										0	0.00%
No takings										0	0.00%
Meetings/ Field Checks/ Coordination											
- One Public Meeting	4	4	4		4					16	1.17%
Prep Exhibits; post minutes			20		12		12	4		48	3.52%
- One Local Officials Meeting	2		2							4	0.29%
- Three plan review meetings	6		6		6					18	1.32%
- Preconstruction meeting			4		4			2		10	0.73%
Permits											
- Section 404			24			16	8			48	3.52%
Army Corps of Engineers - 401 certification											
IEPA - wetland delineation											
- Joint Permit			4		16		8			28	2.05%
Compensatory Storage Study for Floodplain			16		16		8			40	2.93%
IDNR office of Water Resources; ICPA - all Lake County is Urban Area; (LCSMC - not gauged or navigable; IDOC & ACOE - under 1 sq mi)											
- Cultural Resources			2		4					6	0.44%
IDOT: land acquisition - no, easements - no, borrow - yes, subcontract											
- Borrow/Use Areas			8		8		8			24	1.76%
IDOT: borrow areas - yes											
- Lake County Watershed Development Permit			16		8		16			40	2.93%
LCSMC - modifying water course draining 20 or more acres - yes; work in a floodplain with area > 100 acres - yes;											
- Endangered Species										0	0.00%
IDOC - earthwork - yes; subcontract - done											
- Environmental Site Assessment/survey										0	0.00%
subcontract - done											
Agency Coordination											
Division deals with municipalities & local agencies.											
- IDOC	1	1	2		6			2		12	0.88%
- IDNR	1	1	2		6			2		12	0.88%
Total Roadway Design	17	18	400	0	318	110	266	34	0	1163	85.33%

BREAKDOWN OF ROADWAY PERSON-HOURS
DESIGN

Firm	APPLIED TECHNOLOGIES, INC.	Date	08/19/08
Route	Miller Road		
Section	08-00118-09-BR		
County	Lake		
Job No.	-		
Project	Miller Road Improvement		

Tasks	Proj. Princ.	Proj. Mgr.	Sr. Engr.		Proj. Engr.	Sr. Tech.	Tech.	Admin.		Total Hours	% Hours by Task
Coordinate Field survey and basemap production											
Coordinate Field survey and basemap production			2		2	12	8			24	1.76%
QC/QA		2								2	0.15%
Total Survey	0	2	2	0	2	12	8	0	0	26	
Coordinate Geotechnical soil borings and Report											
Coordinate Geotechnical soil borings and report		2	8		4					14	1.03%
Total Geotechnical	0	2	8	0	4	0	0	0	0	14	
Coordinate Environmental Assessment and Report											
Coordinate Environmental Assessment and Report			4	2	2	8				16	1.17%
	0	0	4	2	2	8	0	0	0	16	
QC/QA	30	1	1							32	2.35%
Sub-Total (Hydraulic Recalc, Design, Misc. Items)	49	23	431	2	366	130	274	34	0		
Administration/Management	54									54	3.96%
Total (Sub-Total and Admin/Mgnt)	103	23	431	2	366	130	274	34	0	1,363	100.00%

Division of Roadway Hours											
Preliminary Road 20%	3	4	80	0	64	22	53	7	0	233	20.03%
Second Road submittal 50%	9	9	200	0	159	55	133	17	0	582	50.04%
Final Road 25%	4	5	100	0	80	28	67	9	0	293	25.19%
PS&E 5%	1	0	20	0	15	5	13	1	0	55	4.73%
	17	18	400	0	318	110	266	34	0	1163	100.00%

% Hours by Class	7.56%	1.69%	31.62%	26.85%	9.54%	20.10%	2.49%	100.00%
Escalated Hourly Rates from Exhibit A	$140.29	$132.04	$111.41	$101.09	$111.41	$78.40	$55.70	
Direct Labor Cost	$14,450	$3,037	$48,016	$36,999	$14,483	$21,481	$1,894	$140,359
% Cost by Class	10.29%	2.16%	34.21%	26.36%	10.32%	15.30%	1.35%	100.00%

40.9% technical
59.0% non-technical

DRY LAND BRIDGE - BREAKDOWN OF STRUCTURE TASKS & PERSON-HOURS

Firm: APPLIED TECHNOLOGIES, INC.
Route: Miller Rd
Section:
County: Lake
Job No.:
PTB & Item:
Project: Miller Rd - Dry Land Bridge

Date: 21-Aug-08
Removal of existing earth and roadway Replacement with a 900 ft, 30 ft wide Dry Land Bridge
Staged Construction, No skew, No vertical crest curve
No horizontal curve with superelevation

Bridge Manual Ref.	Tasks	Proj. Princ.	Sr. Proj. Mgr.	Sr. Engr. Sr. Proj. Engr.	Proj. Engr. Jr. Proj. Engr.	Sr. Tech.	Tech. Jr. Tech.	Admin.	Total Hours
	TSL PREPARATION								
	PLANS (Figure 2.8-4)								
1.5.1	General	10	10	10	12	8			50
1.5.2	Plan View		6	8	12	6	32		64
1.5.3	Elevation View		3	4	12	6	32		57
1.5.4	Upper Corner Data		1	4	6	6	6		23
1.5.5	Cross Section		3	4	10	6	25		48
1.5.6	Section Thru Abutment		2	4	10	6	20		42
1.5.7	Pier Sketch		1	4	10	6	16		37
1.5.8	Supplemental Sections		2	4	10	6	20		42
1.5.9	Title Block				2		2		4
1.5.10	Profile Grade			4	10		12		26
1.5.11	~~Horizontal Curve Data~~			0	0		0		0
1.5.12	Location Sketch				2	2	12		16
1.5.13	Design Stresses				4	1	8		13
1.5.14	Other (Waterway Information, Roadway Data)			2	4	2	4		12
	SUBTOTAL	10	28	48	104	55	189	0	434
	BRIDGE PLANNING PROCESS								
2.2.1	Structure Report	2	8	8	6			8	32
	Structure Analysis of Borings	2	4	4	6				16
	SUBTOTAL	4	12	12	12	0	0	8	48
	PRELIMINARY BRIDGE INVESTIGATION								
2.3.2	~~Bridge Type Study~~								0
2.3.4	Aesthetic concepts	4	4	4	8				20
	Data Collection (1 Trips)	8	8						16
	Meetings INCLUDED IN ROADWAY #'S	0	0						0
	SUBTOTAL	12	12	4	8	0	0	0	36
	TOTAL TSL PREPARATION	26	52	64	124	55	189	8	518
	PREFINAL DESIGN								
	PLANS								
1.6.1	General, notes, bill of material	9	12	18	24	8	18		89
1.6.2	General Plan & Elevation	6	12	12	24	8	18		80
1.6.3	Stage Construction Details, plans & cross section	6	12	15	24	8	18		83
1.6.3	Construction Sequence, sheet piling, notes	6	18	27	24	8	18		101
1.6.4	Deck Elevations, deflections, pouring sequence	6	30	36	48	8	24		152
1.6.5	Deck Details, plans, sections, end of deck, piers, parapets	6	36	60	68	8	36		214
	Side Wall Details	6	10	16	48	8	36		124
1.6.6	Rail Details (standard railings)	3	12	12	8	8	6		49
1.6.7	~~Framing Plan, Framing Details, Tables~~	0	0	0	0	0	0		0
1.6.7	~~Bearings, Anchor bolts details (IDOT Base sheets)~~	0	0	0	0	0	0		0
1.6.8	Abutment Details Wing Walls, plans, elevs, bills	6	30	36	48	8	36		164
1.6.9	Pier Details, plans, elevs, bills	6	24	30	60	8	36		164
1.6.10	Standardized Details (drainage, barriers, etc.)	6	12	12	12	8	18		68
2.7.	Attachment of Utilities on Structure		6	3	12		12		33
1.6.11	Quantity Calculations	6	12	18	48				84
1.6.11	Structure Special Provisions	6	30	30					66
1.6.12	Pay Item Worksheet	6	6	6					18
3.1.2	Boring Logs	0	3	3	3	10	15		34
	Data Collection (1 Trip)	8	8						16
	Specs	2	2	6	16			4	30
	Meetings INCLUDED IN ROADWAY #'S	0	0						0
	Reviews Revisions	12	24	24	48	10	18		136
	SUBTOTAL	106	299	364	515	108	309	4	1705
	PHASE II CONSULTANT CONTRACTS								
1.7.	~~Plan Development Outline~~								0
1.7.1	~~Interim Plan Review Meeting, Central Office~~								0
	SUBTOTAL	0	0	0	0	0	0	0	0
	FINAL DESIGN								0
	Approximately 25% of prefinal design effort	26	70	65	105	27	64	4	364
									0
	SUBTOTAL	26	70	65	105	27	67	4	364
	TOTAL OF PREFINAL AND FINAL DESIGN	132	369	429	620	135	376	8	2069
	TOTAL STRUCTURE PERSONHOURS	**158**	**421**	**493**	**744**	**190**	**565**	**16**	**2587**
	% Hours by Class	6.11%	16.27%	19.06%	28.76%	7.34%	21.84%	0.62%	100.00%
	Weighted Hourly Rates from Exhibit A	$140.56	$132.29	$111.62	$101.28	$0.00	$111.62	$55.81	
	Direct Labor Cost	$22,208	$55,693	$55,028	$75,355	$0	$63,064	$893	$272,240
	% Cost by Class	8.16%	20.46%	20.21%	27.68%	0.00%	23.16%	0.33%	

41.4% technical
58.6% non-technical

3 SPAN BRIDGE - BREAKDOWN OF STRUCTURE TASKS & PERSON-HOURS

Firm: APPLIED TECHNOLOGIES, INC.
Route: Miller Rd
Section:
County: Lake
Job No.:
PTB & Item:
Project: Miller Rd - 3 Span Slab Bridge

Date: 21-Aug-08
Removal of existing earth and roadway Replacement with a
90 ft, 30 ft wide 3 span Slab Bridge
Staged Construction, No skew, No vertical crest curve
No horizontal curve with superelevation

Bridge Manual Ref.	Tasks	Proj. Princ.	Sr. Proj. Mgr.	Sr. Engr. Sr. Proj. Engr.	Proj. Engr. Jr. Proj. Engr.	Sr. Tech.	Tech. Jr. Tech.	Admin.	Total Hours
	TSL PREPARATION								
	PLANS (Figure 2.8-4)								
1.5.1	General	4	2	2	4	2			14
1.5.2	Plan View		2	2	4	2	2		12
1.5.3	Elevation View		2	2	4	2	2		12
1.5.4	Upper Corner Data			2	2		1		5
1.5.5	Cross Section			2	4	1	3		10
1.5.6	Section Thru Abutment			2	4	1	3		10
1.5.7	Pier Sketch			2	4	2	2		10
1.5.8	Supplemental Sections			2	2		2		6
1.5.9	Title Block						1		1
1.5.10	Profile Grade			2	1		1		4
1.5.11	Horizontal Curve Data			2	1		1		4
1.5.12	Location Sketch				1		1		2
1.5.13	Design Stresses				1		1		2
1.5.14	Other (Waterway Information, Roadway Data)			1	1		1		3
	SUBTOTAL	4	6	21	33	10	21	0	95
	BRIDGE PLANNING PROCESS								
2.2.1	Structure Report	1	6	6	4			2	19
	Structure Analysis of Borings	1	4		4				9
	SUBTOTAL	2	10	6	8	0	0	2	28
	PRELIMINARY BRIDGE INVESTIGATION								
2.3.2	Bridge Type Study	1	2	2	2				7
	Data Collection (1Trip)	8	8						16
	Meetings INCLUDED IN ROADWAY #'S	0	0						0
2.3.4	Aesthetic concepts	1	2	2	2				7
	SUBTOTAL	10	12	4	4	0	0	0	30
	TOTAL TSL PREPARATION	16	28	31	45	10	21	2	153
	PRE FINAL DESIGN								
	PLANS								
1.6.1	General, notes, bill of material	4	6	8	8	2	5		33
1.6.2	General Plan & Elevation	2	4	4	8	3	5		26
1.6.3	Stage Construction Details, plans & cross section	2	4	5	8	3	5		27
1.6.3	Construction Sequence, sheet piling, notes	2	8	9	8	3	5		35
1.6.4	Deck Elevations, deflections, pouring sequence	2	10	12	16	3	5		48
1.6.5	Deck Details, plans, sections, end of deck, piers, parapets	2	12	18	24	5	12		73
1.6.6	Rail Details (standard railings)	1	4	4	8	3	6		26
1.6.7	~~Framing Plan, Framing Details, Tables~~	0	0	0	0	0	0		0
1.6.7	~~Bearings, Anchor bolts details (IDOT Base sheets)~~	0	0	0	0	0	0		0
1.6.8	Abutment Details, plans, elevs, bills	2	10	12	16	5	10		55
1.6.9	Pier Details, plans, elevs, bills	2	8	10	20	5	10		55
1.6.10	Standardized Details (drainage, barriers, etc.)	2	3	4	4	3	5		21
2.7.	Attachment of Utilities on Structure		2	1	4		3		10
1.6.11	Quantity Calculations	2	6	6	18				32
1.6.11	Structure Special Provisions	2	8	10					20
1.6.12	Pay Item Worksheet	2	2	2					6
3.1.2	Boring Logs	0	1	1	1	2	4		9
	Data Collection (1Trip)	8	8						16
	Specifications	2	2	6	16			4	30
	Meetings INCLUDED IN ROADWAY #'S	0	0						0
	Reviews Revisions	5	8	8	16	3	5		45
	SUBTOTAL	42	106	120	175	40	80	4	567
	~~PHASE II CONSULTANT CONTRACTS~~								
1.7.	~~Plan Development Outline~~								0
1.7.1	~~Interim Plan Review Meeting, Central Office~~								0
	SUBTOTAL	0	0	0	0	0	0	0	0
	FINAL DESIGN								
	Approximately 25% of pre final design effort	11	26	30	44	10	20	4	145
									0
	SUBTOTAL	11	26	30	44	10	20	4	145
	TOTAL OF PREFINAL AND FINAL DESIGN	53	132	150	219	50	100	6	712
	TOTAL STRUCTURE PERSONHOURS	**69**	**160**	**181**	**264**	**60**	**121**	**10**	**865**
	% Hours by Class	7.92%	18.50%	20.92%	30.49%	6.94%	13.99%	1.16%	100.00%
	Weighted Hourly Rates from Exhibit A	$140.56	$132.29	$111.62	$101.28	$0.00	$111.62	$55.81	
	Direct Labor Cost	$9,628	$21,166	$20,203	$26,713	$0	$13,506	$558	$91,774
	% Cost by Class	10.49%	23.06%	22.01%	29.11%	0.00%	14.72%	0.61%	

47.3% technical
52.6% non-technical

DIRECT CHARGES AND EXPENSES

Firm	APPLIED TECHNOLOGIES, INC.	Date	19-Aug-08
Route	Miller Road		
Section	08-00118-09-BR		
County	Lake		
Job No.	-		
Project	Miller Road Improvement		
0	0		

Travel		number	mileage			
Preliminary Structure Plans						
Data Collection	site	2	120	$0.585	=	$140
Meetings		1	240	$0.585	=	$140
Preliminary Plans						
Meetings		2	240	$0.585	=	$281
Data Collection	site	2	120	$0.585	=	$140
Prefinal Plans						
Meetings		2	240	$0.585	=	$281
Final Plans						
Meetings		2	240	$0.585	=	$281

Printing		sheets	sets	per sheet		
Preliminary Structure Plans						
Bridge Office	quarter size	15	6	$1.30	=	$117
	digital reduction	15	1	$2.75	=	$41
	structure special provisions	15	6	$1.00	=	$90
	pay item worksheet	1	3	$0.25	=	$1
Preliminary Plans						
Outside Agencies	full size	20	10	$1.30	=	$260
Outside Agencies	special provisions	50	10	$0.25	=	$125
Utilities, ATI *	full size	20	12	$1.30	=	$312
Utilities	special provisions	50	12	$0.25	=	$150
	digital reduction	20	1	$2.75	=	$55
District Bureaus	quarter size	20	15	$1.30	=	$390
District Bureaus	special provisions	50	15	$0.25	=	$188
District Bureaus	full size	20	20	$1.30	=	$520
Prefinal Plans						
Other Agencies	full size	60	10	$1.30	=	$780
Other Agencies	special provisions	50	10	$0.25	=	$125
Utilities, ATI *	full size	60	12	$1.30	=	$936
Utilities	special provisions	50	12	$0.25	=	$150
	digital reduction	60	1	$2.75	=	$165
District Bureaus	quarter size	60	15	$1.30	=	$1,170
District Bureaus	special provisions	60	15	$0.25	=	$225
District Bureaus	full size	60	15	$1.30	=	$1,170

Final Plans

District - Contract Plans	full size	70	4	$1.50	=	$420
District - Contract Plans	special provisions	50	4	$0.15	=	$30
District Bureaus	quarter size	70	7	$1.50	=	$735
District Bureaus	special provisions	50	8	$0.15	=	$60
Utilities, ATI *	full size	70	12	$1.50	=	$1,260
Utilities, ATI *	special provisions	50	12	$1.50	=	$900
Other Agencies	full size	70	5	$1.50	=	$525
Other Agencies	special provisions	50	5	$0.15	=	$38
	digital reduction	70	1	$2.75	=	$193
	qty calcs, est time, bar charts	150	2	$0.25	=	$75

PS&E

District	regular mylars-not digital	70	1	$6.50	=	$455
District - Contract Plans	full size	70	4	$1.50	=	$420
District - Contract Plans	special provisions	50	4	$0.15	=	$30
District Bureaus	quarter size	70	7	$1.50	=	$735
District Bureaus	special provisions	50	8	$0.15	=	$60
District	pdfs	70	1	$5.00		$350

* includes one office copy and one working set

Express Postage			parcel	cost		
Preliminary Structure Plans	UPS		1	$25.00	=	$25
Preliminary Plans	UPS		1	$175.00	=	$175
Prefinal Plans	UPS		1	$175.00	=	$175
Final Plans	Federal Express		1	$175.00	=	$175

Miscellaneous Expenses						
Film	film & processing	3	rolls	$20.00	=	$60
Fax & Long Distance Calls						$450

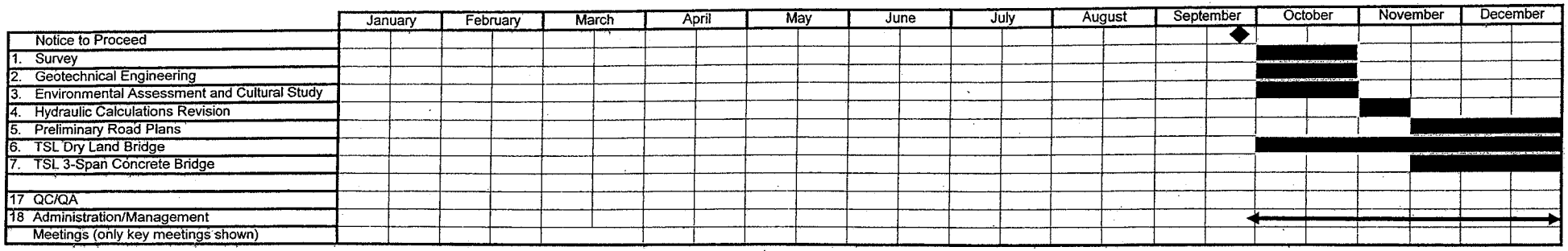
Total $15,579

SUMMARY

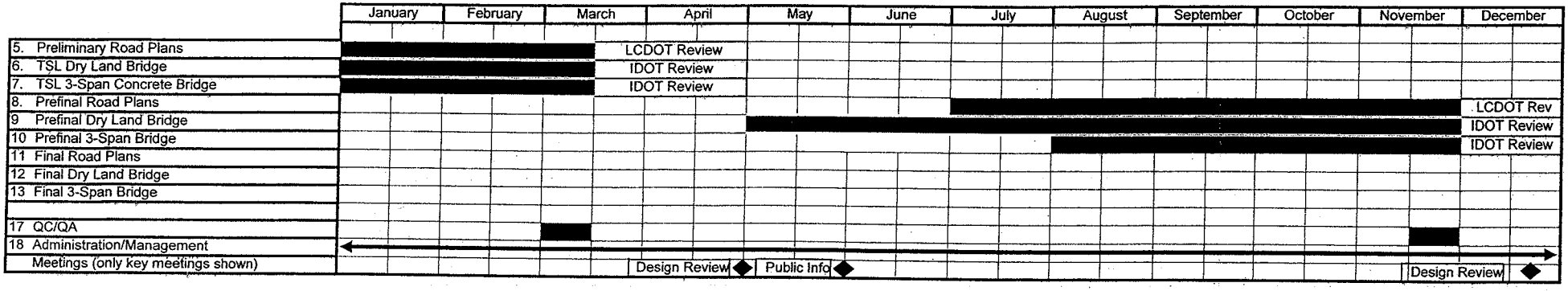
Preliminary Plans	$3,322.50
Prefinal Plans	$5,289.50
Final Plans	$4,804.50
PS&E	$2,162.50
	$15,579

Lake County Division of Transportation
Miller Road Bridge Improvement Project

Timeline for Scheduling
2008



Timeline for Scheduling
2009



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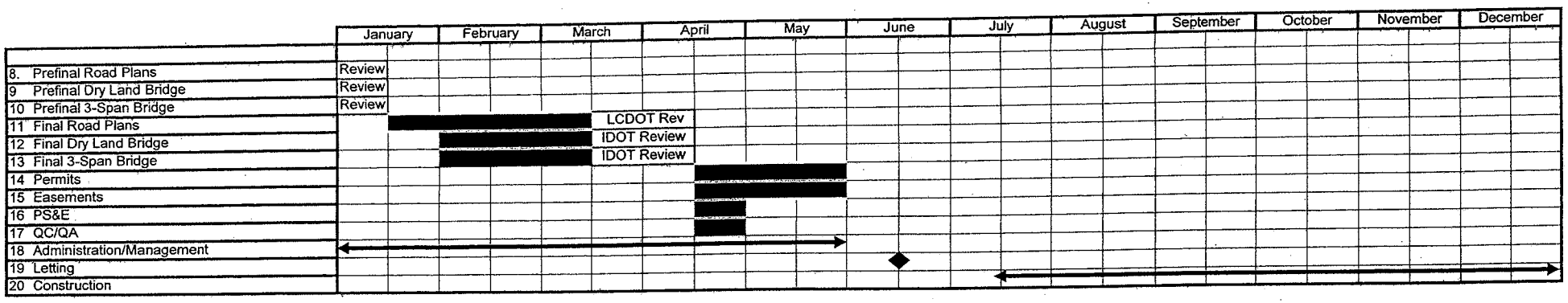
Timeline for Scheduling
2010



State of Illinois
Department of Transportation
Bureau of Local Roads and Streets

SPECIAL PROVISION FOR EMPLOYMENT PRACTICES

Effective: January 1, 1999

In addition to all other labor requirements set forth in this proposal and in the Standard Specifications for Road and Bridge Construction, adopted by the Department of Transportation, during the performance of this contract, the Contractor for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor") agrees as follows:

Selection of Labor. The Contractor shall comply with all Illinois statutes pertaining to the selection of labor.

Equal Employment Opportunity. During the performance of this contract, the Contractor agrees as follows:

(a) That it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, ancestry, age, marital status, physical or mental handicap or unfavorable discharge from military service, and further that it will examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any such underutilization.

(b) That, if it hires additional employees in order to perform this contract or any portion hereof, it will determine the availability of minorities and women in the area(s) from which it may reasonably recruit and it will hire for each job classification for which employees are hired in such a way that minorities and women are not underutilized.

(c) That, in all solicitations or advertisements for employees placed by it or on its behalf, it will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, national origin, ancestry, age, martial status, physical or mental handicap or unfavorable discharge from military service.

That it will send to each labor organization or representative of workers with which it has or is bound by collective bargaining or other agreement or understanding, a notice advising such labor organization or representative of the Contractor's obligations under the Illinois Human Rights Act and the Department's Rules and Regulations. If any such labor organization or representative fails or refuses to cooperate with the Contractor in its efforts to comply with so such Act and Rules and Regulations, the Contractor will promptly so notify the Illinois Department of Human Rights and the contracting agency and will recruit employees from other sources when necessary to fulfill its obligations thereunder.

(e) That it will submit reports as required by the Department of Human Rights Rules and Regulations, furnish all relevant information as may from time to time be requested by the Department or the contracting agency, and in all respects comply with the Illinois Human Rights Act and the Department's Rules and Regulations.

(f) That it will permit access to all relevant books, records, accounts and work sites by personnel of the contracting agency Illinois Department of Human Rights for purposes of investigation to ascertain compliance with the Illinois Human Rights Act and the Department's Rules and Regulations.

(g) That it will include verbatim or by reference the provisions of this clause in every subcontract so that such provisions will be binding upon every such subcontractor. In the same manner as with other provisions of this contract, the Contractor will be liable for compliance with applicable provisions of this clause by all its subcontractors; and further it will promptly notify the contracting agency and the Illinois Department of Human Rights in the event any subcontractor fails or refuses to comply therewith. In addition, the Contractor will not utilize any subcontractor declared by the subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations.

Applied Technologies
Engineers - Architects

Applied Technologies, Inc.
300 North Milwaukee Avenue, Suite E
Lake Villa, Illinois 60046
Fax 847-265-7327
Telephone 847-265-7325
www.ati-ae.com

August 22, 2008

Mr. Satrughan Shrestha
Lake County Division of Transportation
600 West Winchester Road
Libertyville, IL 60048-1381

Subject: Subcontractor Listing
Miller Road Bridge Improvement Project
Section 08-00118-09-BR

Dear Satrughan:

There will be three subcontractors assisting Applied Technologies, Inc. on the Miller Road Bridge Improvement Project.

Hey and Associates located in Libertyville, Illinois will be completing the wetland field investigation and report, the request for delineation concurrence and jurisdictional determination, and the listed species consultation. They will also be completing the landscaping plan for the dry land bridge retaining wall and complete bidding and construction related services. See attached proposal.

Giles Engineering Associates, Inc. will be completing the geotechnical engineering exploration and analysis of subsurface soils. See attached proposal.

Howard Surveying Company, Inc located in Beach Park, Illinois will be completing the spot check survey to evaluate the existing survey information and to field survey the wetland delineation. See attached proposal.

Please let us know if you have any questions or comments.

Sincerely,

APPLIED TECHNOLOGIES, INC.

Joyce J. DeLong, P.E.

/jjd

J:\3346\WORDPROC\COMM\CORR_OUT\LCDOT Satrughan32 Subcontractor List revised 08-08-21.doc

Hey and Associates, Inc.

Water Resources, Wetlands and Ecology

26575 W. Commerce Drive, Suite 601
Volo, Illinois 60073
Phone (847) 740-0888
Fax (847) 740-2888

Chicago and Geneva, Illinois *Brookfield, Wisconsin*

August 8, 2008

Ms. Joyce J. DeLong, P.E.
Applied Technologies, Inc.
300 North Milwaukee Avenue, Suite E
Lake Villa, Illinois 60046

Proposal No.: P309-08-E

Re: Wetland Consulting Services
Miller Road Improvements--LCDOT
North Barrington, Illinois

Dear Ms. DeLong:

As requested, we would be pleased to re-delineate wetlands in the Miller Road project corridor to reflect current wetland boundaries and conditions. We propose the following services.

Field Investigation and Wetland Delineation

We will complete a field investigation within 100 feet of the edge of pavement on both sides of Miller Road within the project limits (approx. 2,000 feet) and perform a routine wetland delineation applying the general procedures detailed in the 1987 U.S. Army Corps of Engineers' (Corps) wetland delineation manual. Based on experience with the last delineation in 2003, we will include roadside ditches in our delineation. We will identify and flag wetland boundaries for surveying by your firm. Once the survey work is completed, we will need a copy of the survey in order to prepare our report.

We will utilize the information obtained to complete a full wetland delineation report suitable for permit submittals. The report will be in accordance with Corps and Lake County requirements including an aerial photograph showing the current surveyed wetland boundaries, required Corps dataforms for sample points, observed current vegetative species lists, and representative color photos. We will complete this task for a lump sum of $3,000.

Request for Jurisdictional Determination/Wetland Boundary Concurrence

We recommend that a jurisdictional determination and wetland boundary concurrence be obtained from Lake County Stormwater Management Commission (LCSMC) after our delineation report is completed. We will prepare and submit correspondence requesting a jurisdictional determination and wetland boundary concurrence and if necessary, attend one field meeting. LCSMC will require a review fee to be paid by your firm or LCDOT (unless waived) and will typically respond in writing within 30 days. We will complete this task for a lump sum of $400.

PERMIT CONSULTATION

Any impacts to wetlands or waters for the project will require a permit from the Corps or from LCSMC if the impacted wetlands are isolated. At this time, the level of permitting required is not known. However, after the jurisdictional determination is completed, we are prepared to provide wetland permitting consultation in the planning process. We can review proposed site plans and provide regulatory guidance regarding wetland permitting and wetland mitigation as necessary. We are prepared to complete such tasks on a time and materials basis with an estimated initial total of $1,000.

Reimbursable expenses are in addition to the lump sum fees noted above and are included in the time and material cost estimate. They include travel mileage, reproductions, shipping/delivery, aerial photographs, phone and other communication charges, consultants and subcontractor fees, equipment and supply costs related to the project. We estimate reimbursable expenses at $200 for this project.

RETAINING WALL LANDSCAPE DESIGN

We will prepare landscape design documents with the goal of softening the appearance of approximately 900 LF of 3-4' tall retaining wall on both side of the right-of-way. All landscape design will be completed under the direction of an Illinois Registered Landscape Architect (RLA), and can be sealed by the RLA if required. During this task we propose to:

- Prepare base sheet(s) for the landscape plans in AutoCAD format using base info provided by Applied Technologies.
- Prepare a preliminary landscape plan showing the proposed location of plantings and a listing of recommended species for review by the client. We will deliver three hard copies of the preliminary plan and an electronic copy in PDF format.
- After approval of the preliminary plan, we will prepare final landscape plans consisting of plan view and detail drawings necessary to bid and construct the landscape improvements. It is our understanding that these landscape plans will be incorporated into the overall project plan set by Applied Technologies. We will deliver three hard copies of the final plans and an electronic copy in PDF format.
- We will prepare one technical specification/special provision section necessary to bid and construct the landscape improvements. It is our understanding that the specifications will be incorporated into the overall project manual by Applied Technologies. We will deliver electronic copies of the specifications in MS Word and PDF format.
- We have included a modest amount of time for minor revisions to the final landscape plans.
- We will provide an opinion of probable cost to construct the landscape improvements at the preliminary and final plan stages.

Estimated fees and reimbursable expenses: $10,000

BIDDING AND CONSTRUCTION

During this project task we will:

- Respond to bidder inquiries pertaining to the landscape plans.
- Prepare modifications to the plans or specifications and forward to the client for inclusion in addenda as required.
- Review contractor submittals relating to the landscape improvements during construction.
- We have included a modest amount of time for two field meetings during construction.
- Upon client request at substantial completion, we shall conduct a site visit and prepare a punch list of non-conforming work.
- Upon client request, we shall conduct a follow-up site visit to assess correction of punch list items.

Estimated fees and reimbursable expenses: $5,000

This proposal does not include work for submittal for wetland permits or development of a mitigation plan. These tasks and any other supplemental work would be in addition to the above amounts or by separate proposal. Our Standard Terms and Conditions are attached. If this agreement is acceptable, please sign below and return it to us. Should you have any questions, please contact Vince Mosca at our Volo office.

Vince Mosca	
Hey and Associates, Inc.	Applied Technologies, Inc.
Maggie Griswold	
Attest	Attest
8-8-08	
Date	Date

Please return the fully executed proposal in the return envelope provided.

EXHIBIT A – ATTACHMENT
STANDARD TERMS AND CONDITIONS

Hey and Associates, Inc.

COMPENSATION	Hourly Billing Rate
Principals	
Schaefer, President	$160
Raasch, Senior Vice President	$140
Mosca, Vice President – Ecological Sciences and Permitting	$140
Polzin, Vice President - Civil Engineering	$140
O'Reilly, Vice President - Water Resources Planning	$120
Engineering	
Wickenkamp, Vice President	$125
Senior Water Resources Engineer	$110
Water Resources Engineer	$90-100
Engineering Designer	$90
Engineering Technician	$45-70
Landscape Design	
Senior Landscape Architect	$100
Senior Landscape Designer	$75
Erosion Control	
Certified Professional in Erosion and Sediment Control	$100
Soil Erosion and Sediment Control Specialist	$60
Ecological Services	
Wetlands and Ecology	
Environmental Services Manager	$95
Water Resources Planner	$85
Environmental Scientist	$70-85
Native Landscape Restoration	
Field Services Manager	$90
Environmental Scientist	$70-85
Environmental Intern	$40
Subsurface Drainage Services	
Subsurface Drainage Services Manager	$90
Engineering Technician	$45-70
Design Support	
CAD Technician	$55-65
Administration	
Administrator	$60
Administrative Assistant	$45

REIMBURSABLE EXPENSES

Reimbursable expenses shall be reimbursed at cost plus an 8% administrative service charge. Such expenses shall include, but are not necessarily limited to travel, reproduction, shipping/delivery, aerial photographs, phone and other communication charges, consultants and subcontractor fees, equipment and supply costs related to the execution of the project. Fixed reimbursable expense costs are as follows:

Travel	$ .55/mile
Copies	$ .10/page
Software/Digital Resource Charge	$100.00/project
ATV Usage	$ 40.00/hour
ATV Discing, Herbicide Spraying, Mowing	$ 45.00/hour
Chain Saw Usage	$ 20.00/hour
Additional Plotting, B & W	$ .50/sq. ft.
Additional Plotting, Color	$ .75/sq. ft.
Additional Plotting, Mylar	$ 1.00/sq. ft.

BILLING

Billings shall be on a monthly basis and are payable upon receipt. An additional charge of 1½ percent per month (18% per annum) shall be applied to any balance unpaid more than 30 days beyond receipt of invoice. Client shall pay any attorney's fees, court costs or other expenses incurred collecting delinquent accounts.

Hey and Associates Inc. (Hey), with seven days written notice, reserves the right to suspend or terminate work under this agreement on any account that is past due.

The Client's obligation to pay for the work contracted is in no way dependent upon the Client's ability to obtain financing, zoning, permit approval by governmental or regulatory agencies, or upon the Client's successful completion of the project.

The rates presented herein are effective for the period January 1, 2008 through January 31, 2009 and shall be subject to modification on February 1, 2009.

LIMITATION OF COSTS

Hey will not be obligated to continue performance or incur costs beyond the estimated costs unless the Client agrees in writing to a revised cost estimate.

CLIENT'S RESPONSIBILITIES

Client shall arrange for access to and make all provisions for Hey to enter upon private and public property as required for Hey to perform services under this Agreement.

Client shall provide Hey with all existing available information regarding this project as required. Hey shall be entitled to rely upon information and documentation provided by the Client or consultants retained by the Client in relation to this project, however Hey assumes no responsibility or liability for their completeness or accuracy.

COST OPINIONS

Any cost opinions or project economic evaluations provided by Hey will be on the basis of experience and judgment, but, because Hey has no control over market conditions or bidding procedures, we cannot warrant that bids, construction cost, or project economics will not vary from these opinions.

STANDARD OF CARE

The services provided by Hey under this Agreement will be performed as reasonably required in accordance with generally accepted standards for services as offered in the proposal for this project at the time and the place where the services are performed.

INSURANCE

Throughout the duration of the project, Hey will procure and maintain the following insurance:

Liability	Limits of Liability
Workers' Compensation and Employer's Liability	$ 500,000 each incident
Comprehensive General Liability	$ 2,000,000
Professional Liability	$ 1,000,000
Automobile Liability	$ 1,000,000

Within the limits of this insurance, Hey agrees to hold the Client harmless from and against loss, damage, injury or liability arising directly from the negligent acts or omissions of employees, agents or subcontractors of Hey.

Client will limit any and all liability, claim for damages, losses, cost of defense, or expenses to be levied against Hey on account of any design defect, error, omission, or professional negligence to a sum not to exceed the amount of Hey's fee under this agreement. Should the Client require other types of insurance coverage, limits in excess of the above limits, and/or certificates naming any other(s) than the Client as additional insured parties, Hey's cost of obtaining such coverage, limits, or certificates shall be reimbursable by the Client.

January, 2008

IMPORTANT

Notice Regarding This PDF File Transmission

If you received this transmission in error, please notify Giles Engineering Associates, Inc., by telephone (1-800-782-0610) or by return e-mail. The information contained in this PDF file is intended solely for the private and confidential use of the designated recipient. If you are not a designated or authorized recipient, further review, dissemination, distribution, or copying of this transmission is strictly prohibited.

To the Authorized Recipient:

This PDF file is an electronic transmission of our proposal. An authenticated copy will be issued to you per your request for your files. The authenticated copy will be affixed with original signatures and/or our corporate seal. While we have taken precautions to assure a complete and secure electronic transmission, please be certain to check this proposal against the authenticated copy for conformity.

GILES ENGINEERING ASSOCIATES, INC.

GILES
ENGINEERING ASSOCIATES, INC.
GEOTECHNICAL, ENVIRONMENTAL & CONSTRUCTION MATERIALS CONSULTANTS

• Atlanta, GA
• Baltimore/Wash. DC
• Dallas, TX
• Los Angeles, CA
• Milwaukee, WI
• Orlando, FL

July 29, 2008

Applied Technologies, Inc.
16815 West Wisconsin Avenue
Brookfield, WI 53005

Attention: Mr. Robert Janke

Project: Additional Geotechnical Engineering Exploration and Analysis
Proposed Miller Road Reconstruction
North Barrington, Illinois
Proposal No. 1GP-080752

Dear Mr. Janke:

We appreciate the opportunity to offer our services. Giles Engineering Associates, Inc. (Giles) has been performing geotechnical engineering services for over 32 years on a local and national basis. Our experience in the earlier phases of this project and our dedication to quality engineering will be a benefit in the successful completion of the project. For more information about Giles, please visit us on the web at www.gilesengr.com.

PROJECT HISTORY AND DESCRIPTION

In accordance with your request and our recent meetings, we are pleased to present our proposal to provide additional geotechnical engineering services for the proposed Miller Road reconstruction project in North Barrington, Illinois. Giles previously prepared a *Geotechnical Engineering Exploration and Analysis* for the proposed project (Project No. 1G-0301017, dated October 22, 2003). Based on the results of that study and discussions between Applied Technologies, Inc. and the Lake County Department of Transportation (LCDOT), several alternates were determined to be possible for the proposed roadway reconstruction. Those alternates include: 1) Vertical Drains with reinforced concrete boxes (RCB); 2) Dry Land Bridge with RCB; 3) Dry Land Bridge with 3-Span Concrete Slab Bridge; 4) Stone Columns with mechanically stabilized earth (MSE) wall and vertical drains with RCB and 5) Geopiers with RCB. It was decided that the Dry Land Bridge option with the 3-span Concrete Slab Bridge is the desired option and the basis of this additional subsurface exploration and analysis.

It is understood that the project will include reconstruction of an approximate 1000-foot section of Miller Road, in the City of North Barrington, Lake County, Illinois. The reconstruction is required to raise the roadway above the 100-year flood elevation. The proposed Dry Land Bridge will include the placement of fill to allow for a construction platform for the placement of driven piles for support of the planned 3-span concrete slab bridge. The bridge will be supported by pile supported pier caps that will placed every 30 lineal feet. The loads associated with the planned dry land and concrete slab bridges were not known at the time of this proposal; however, they are anticipated to be relatively heavy in magnitude.

It is understood that the bridge will be designed using Load Resistance Factor Design (LRFD) design criteria and that a deep (pile) foundation system will be used to support the bridge. In order to provide recommendations for a pile foundation system using LRFD design criteria a

specific pile type proposed for the project will need to be determined or a recommended pile type will be provided based on the soil conditions encountered. However, if the type of pile recommended is not used on the project, the recommendations provided will have to be revised for alternate pile types at additional cost. The actual loading requirements of the bridge and/or desired capacity per pile will also be required in order to provide the most feasible LRFD design criteria and to determine if the borings will need to be extended to a greater depth to provide the desired pile capacities.

Please note that complete project details were not available at the time this proposal was prepared. As such, some assumptions were made regarding preparation of this proposal and the formation of our scope of services. As more information becomes available and final design criteria are determined, Giles will be pleased to revise its scope of services.

SCOPE OF SERVICES

A brief description of our understanding of the scope of services to be provided is discussed in the following paragraphs.

In accordance with our discussions, the subsurface exploration proposed for this project includes performing thirteen test borings. Ten of the borings will be performed within the currently planned 900 foot segment of the planned Dry Land Bridge (one boring every 90± feet) and the four remaining test borings will be performed to the east and west of the currently planned extent of the bridge for the purpose of identifying the lateral limits of the organic and low strength soils encountered in the previous test borings. The borings are planned to be extended to a depth of 60± feet below the existing ground surface to obtain subsurface information for the planned deep foundation system and to obtain adequate information for LRFD design. Dependent on the actual loading requirements of the bridge and subsurface conditions encountered, deeper test borings may be required. In addition, dependent upon the results of the additional test borings to define the lateral extent of the low strength and/or organic soils, additional test borings extending to the east and west may be necessary. The borings will be extended to planned depths or prior refusal, whichever is less. The proposed exploration program results in a total of 780 lineal feet of test borings.

Depending upon the uniformity or non-uniformity of the subsoils, it may be desirable or necessary to relocate and/or drill additional test borings or extend some of the borings deeper to assist in providing more design and construction estimate information. The need for additional test borings will, however, be made during the performance of the planned field exploration program and only in accordance with your authorization.

Conventional field testing is planned to be performed on the materials encountered in the test borings to determine their classification, strength, compressibility and other characteristics based on subsoil conditions. Groundwater monitoring will be performed in the test borings to assist in evaluating the water table.

The field exploration will consist of performing Standard Penetration Tests (SPT) in general accordance with ASTM D-1586 specifications at 2½-foot intervals throughout the major foundation influence zone, typically the first 10 to 15 feet, and 5 feet thereafter, and/or at each major change in subsurface characteristics. In addition, up to one undisturbed Shelby Tube sample per test boring will be obtained. If questionable and/or soft, compressible strata are encountered, additional undisturbed tube samples may be obtained during the field exploration to allow for evaluation of and for use in specialized soil mechanics laboratory testing.

We propose to perform the subsurface exploration with company-owned and operated drilling equipment. The test borings will be advanced through the soil with standard 2¼ or 3¼-inch I.D. hollow stem augers. Because the test borings will be performed within the existing roadway right-of-way it is planned to perform the test borings with a standard truck-mounted drill. If conditions (soft soils, wet conditions or on-site constraints) necessitate use of other specialized equipment, this service will be charged in accordance with Giles' daily rates, which are included in the enclosed Schedule of Standard Fees. It is understood that the ground surface elevations of the test borings and the location of the test borings in the field will be provided by Applied Technologies, Inc. This proposal does not include the use of special OSHA or hazardous drilling techniques or drill crew protection. Complete rights-of-entry and access to the site are expected to be provided for us as a function of this proposal. Because the test borings will be performed within the active roadway a two-man flagging crew with appropriate signs and traffic control equipment will be required and has been included in the proposed fees for the project.

Standard laboratory testing to determine the classification, strength, compressibility and other general physical characteristics will be performed on the collected soil samples. In addition, unconfined compressive testing is proposed to be performed on the undisturbed Shelby Tube samples obtained. Information obtained from the laboratory testing will be used to determine the soil subgrade capability to support the proposed foundation. Unit costs for special laboratory testing, if required, would be charged at the rates included on the Breakdown of Proposed Fees.

The results of our field exploration and laboratory testing will be utilized in a geotechnical engineering analysis, which will provide the following information presented in a written report prepared by a Registered Professional Engineer.

- Determination of generalized subsurface soil and groundwater conditions and engineering characteristics at the site test borings to depths assigned or to a depth subsequently found necessary for the proposed development.

- Design information for the planned driven pile deep foundation system for support of the proposed Dry Land Bridge and 3-span Concrete Land Bridge based on LFRD design criteria, including estimated total and differential settlements, corresponding allowable soil bearing capacities and/or pile cpacities.

- Lateral earth pressures (active, passive and at-rest) and soil and concrete friction coefficient design parameters, as necessary, will be provided for use in designing below grade structures. Sub-drainage considerations, where applicable, will also be provided where below-grade sections are involved.

- Recommendations regarding construction considerations, including the reuse of excavated on-site materials as structural compacted fill, surface and groundwater problems and control, and other site or area phenomena that is applicable to the proposed project.

SPECIAL CONSIDERATIONS

Please note that Giles will perform subsurface drilling activities with a reasonable standard of care. At the conclusion of drilling activities, Giles will backfill the borehole and surface patch the boreholes with concrete, if necessary. Even with this service, however, it is important to note that some borehole backfill settlement or expansion can and will occur over time. This settlement/expansion can create a hazard and should be carefully monitored by the client and/or property owner. The settlement/expansion can lead to the formation of a "trip joint" representing a threat of injury to persons or animals utilizing or accessing the subject property. Giles has not included a cost for monitoring borehole settlement/expansion after the initial drilling activities and will not be performing this service. Once again, we strongly recommend that the client establish a procedure to monitor and evaluate the post-drilling site conditions, including but not limited to the settlement or expansion of borehole backfill or other surface disturbances that may affect the subject property during and after drilling activities.

PROPOSED FEES

The estimated fee to perform the Geotechnical Engineering Exploration and Analysis outlined above for the referenced project is **$29,627.50**. Additional 60-foot test borings, if required, will be charged at a rate of **$1,200.00** per test boring. Any approved additional work required over and above the scope proposed will be billed in accordance with the attached Schedule of Standard Fees, but will only be billed on the basis of your authorization. Note that the attached *Schedule of Standard Fees*, including the General Notes, *General Conditions* and *Important Information About This Geotechnical Engineering Proposal* are considered portions of this proposed agreement.

SCHEDULE

We propose to initiate the work immediately upon receipt of verbal authorization to proceed. However, please provide formal acceptance by having an appropriate party sign in the space below and returning one copy to us for our file. Depending on conditions encountered, this project is expected to be complete in approximately three weeks from the completion of the field activities and approximately four to five weeks following authorization to proceed.

CLOSING

Thank you for the opportunity to offer our services. We look forward to working with you on this phase of the project. Please acknowledge receipt and acceptance of this proposal by signing and returning one copy for our files. The individual or individuals that sign this agreement on behalf of the client warrant that they are duly authorized agents of the client.

Respectfully submitted,

GILES ENGINEERING ASSOCIATES, INC.

Paul J. Giese, P.E.
Geotechnical Division Manager

ACCEPTED: **APPLIED TECHNOLOGIES, INC.**

BY: _____ _____
(Signature) (Printed Name)

TITLE: _____ **DATE:** _____

Enclosures: Breakdown of Proposed Fees
Schedule of Standard Fees; July 15, 2006
General Conditions; January, 2005
Important Information About This Geotechnical Engineering Proposal

1GP-080752-Proposal/08prop/geo/pjg/mmj

GILES
ENGINEERING ASSOCIATES, INC.

BREAKDOWN OF PROPOSED FEES
ADDITIONAL GEOTECHNICAL EXPLORATION & ANALYSIS
Miller Road Reconstruction
North Barrington, Illinois
Proposal No. 1GP-080752

DESCRIPTION	ESTIMATED QUANTITY	UNIT RATE	ESTIMATED TOTAL
FIELD SERVICES			
1. Mobilization of drilling equipment	7 Rig Days	$225.00/Day	$1,575.00
2. Use of ATV Drill Rig for Site Access (if needed)	--	$375.00/day	--
3. Test Boring Location and Elevations	12 hours	$60.00/Hour	$720.00
4. Soil Borings			
a. 0 to 20 foot depth	260 LF	$9.50/LF	$2,470.00
b. 20 to 40 foot depth	260 LF	$10.20/LF	$2,652.00
c. 40 to 60 foot depth	260 LF	$10.90/LF	$2,834.00
d. 60 to 80 foot depth (if needed)	--	$13.00/LF	--
5. Additional SPT Samples	39	$10.00/Each	$390.00
6. Borehole Abandonment and surface restoration	780 LF	$1.50/LF	$1,170.00
7. Undisturbed Tube Samples	13	$40.00/Each	$520.00
8. 2½ inch diameter ring samples	--	$35.00/Each	--
9. Traffic Control	7 days	$975.00/day	$6,825.00
Estimated Fee for Field Services			**$19,156.00**
LABORATORY TESTING SERVICES			
1. Visual sample classification	195	$2.75/Each	$536.25
2. Moisture content testing	195	$3.75/Each	$731.25
3. Calibrated penetrometer testing	156	$2.75/Each	$429.00
4. Unconfined compression testing (SPT samples)	156	$3.75/Each	$585.00
5. Unconfined compression testing (Tube or ring samples)	13	$30.00/Each	$390.00
6. Consolidation Testing	--	$260.00/Each	--
7. Direct Shear Strength Testing	--	$250.00/Each	--
8. Atterberg LimitsTests	--	$70.00/Each	--
Estimated Fee for Laboratory Testing Services			**$2,671.50**
ENGINEERING SERVICES			
1. Geotechnical Division Manager	10 Hours	$120.00/Hour	$1,200.00
2. Sr. Project Manager	60 Hours	$110.00/Hour	$6,600.00
Estimated Fee for Engineering Services			**$7,800.00**
TOTAL ESTIMATED COST			**$29,627.50**
Additional 60 foot test borings (if needed):			**$1,200.00/Boring**

1GP-080752-fee/08prop/geo/pjg/mmj

SCHEDULE OF STANDARD FEES
EFFECTIVE JULY 15, 2006

GILES
ENGINEERING ASSOCIATES, INC.

I. CONSULTING - GEOTECHNICAL, ENVIRONMENTAL AND CONSTRUCTION MATERIALS

A) Principal of Firm $150.00/HR
B) Technical Consultant/Regional Manager I/Regional and Division Manager II $120.00/HR
C) Senior Professional/Project Manager I/Regional and Division Manager I $110.00/HR
D) Project Professional II (8+ years experience) $100.00/HR
E) Project Professional I (4-8 years experience) $90.00/HR
F) Staff Professional II (2-5 years experience) $75.00/HR
G) Field Professional/Staff Professional I (0-3 years experience) $65.00/HR
H) Senior Field Technician $53.00/HR
I) Associate Field Technician $43.00/HR
J) Field Technician II $38.00/HR
K) Field Technician I $32.50/HR

II. SUBSURFACE EXPLORATION

A) Mobilization of Truck Mounted Drill Equipment
($2.00/Mile One Way) Minimum ..... $245.00 Lump Sum
B) Usage of All-Terrain Equipment (When Necessary for Access) ..... Quote/Project
C) Rental of Equipment for Access or Backhoe for Test Pits ..... Cost +15%
D) Moving Time (2 Hours + Between Borings) or Standby Time $125.00/HR
E) Per Diem (Site Over 75 Miles from Office) (Per Person) $70.00/DAY
F) Support Vehicle Transportation $0.50/MI
G) Boring Layout and Approximate Elevations (Two-Member Crew) and Utility Coordination
by Drilling Supervisor $65.00/HR
H) Drilling Overburden (N Less Than 100) Hole Advance by 3¼-inch I.D. or Smaller Hollow Stem Auger, Includes Soil Sampling with Standard Penetration Test (ASTM D-1586) Performed at 5-Foot Intervals

DEPTH RANGE FEET	DRILLING UNIT PRICE (1) ORDINARY SOIL (2)	HARD SOIL (3)	ADDITIONAL SPT
GS-20	$ 9.50	$12.00	$12.00
20-40	$10.20	$12.70	$15.00
40-60	$10.90	$13.40	$18.00
60-80	$11.60	$14.10	$21.00

(1) Drive Casing and/or Wash Boring to Advance Borings $4.00/LF Additional
(2) Ordinary Soil: N Less Than 50 or qu Less Than 4.5 tsf
(3) Hard Soil: N Greater Than 50 or qu Greater Than 4.5 tsf
(4) Large H.S. Auger Surcharge
a) 4-inch I.D. $1.00/LF Additional
b) 6-inch I.D. $3.00/LF Additional
c) 12-inch I.D. by Special Hourly Rate

I) 2½-inch Diameter Ring Sampling (Replacing SPT) Additional $4.00/EA
J) Undisturbed Tube Soil Sampling 2-inch O.D. $45.00/EA
(Piston Sampler $40.00 Additional) 3-inch O.D. $50.00/EA
K) Disturbed Soil Sampling (Bulk) $40.00/EA
L) Auger-Drilling (No Drive Samples, Auger Samples Only) $8.50/LF
M) Drilling and Sampling Rock and Overburden with N Greater Than 100
1) Rock Boring (3-inch Rock Roller Bit) $20.00/EA
2) Rock Coring (3-inch O.D. Diamond Bit-NX) $29.00/LF
3) Rock Coring and Boring Set-Up Charge $110.00/HOLE
N) Special Field Tests and Installation (Soil and Rock Instrumentation, etc.)
1) Drill Rig and Crew (Two-Member) $125.00/HR
2) Supplies and Material ..... Cost +15%
O) Pressuremeter Tests (Including Test Equipment and Operator, Drill Rig Billed Per Item II,P) (4 or Less Per Day) $400.00/EA
(More Than 4 Per Day) $300.00/EA

GILES
ENGINEERING ASSOCIATES, INC.

III. SPECIAL ENVIRONMENTAL SERVICES

A) Environmental Specialist (Engineer, Geologist, Hydrogeologist, Scientist) for Drilling Supervising, Well Development and Sampling $70.00/HR
B) Decontamination Support Vehicle $160.00/DAY
C) Use of Decontamination Equipment During Field Exploration $160.00/DAY
D) Drilling Equipment Decontamination Before/After Exploration ..... $85.00 Lump Sum
E) Groundwater Monitoring Well Installation (Drilling and Soil Samples Cost Included Under Item II)
1) 2-inch Diameter, 0.20 Machine Slotted PVC Screen with Threaded Connection, Filter Pack Around Screen and Bentonite Seal $22.00/LF
2) 2-inch Diameter Solid PVC Riser with Threaded Connection $18.00/LF
3) Bentonite/Cement Grout Slurry Backfill Around PVC Riser $4.00/LF
4) Well Security Caps and Flush Manhole Covers With Concrete Collars $160.00/EA
F) Asbestos Containing Material (ACM) Microscopic Identification (Including Appropriate Handling) $55.00/EA
G) Volatile Organic Compound (VOC) Detection in Soil (Photoionization Detection (PID) Meter Calibrated to Benzene, Measuring in Parts per Million (ppm)
1) Field $125.00/DAY
2) Lab ..... $125.00 Lump Sum
H) DOT Approved Drilling Spoil Drums (55 Gallon) Left On-Site $45.00/EA
I) Borehole Impervious Backfill for Environmental Considerations
1) 2¼-inch I.D. Hollow-Stem Auger $4.00/LF
2) 3¼-inch I.D. Hollow-Stem Auger $5.00/LF
3) Larger Diameter on Time and Materials Basis
J) Monitoring Well Abandonment (Does Not Include Equipment Mobilization)
1) 2-inch I.D. Well $3.50/LF
2) 3-inch I.D. Well $4.50/LF
3) Larger Diameter on Time and Materials Basis

IV. SOIL LABORATORY TESTING SERVICES

A) Soil Preparation
1) Extrude/Prepare Tube Sample for Testing and Classification $20.00/EA
2) Preparation of Remolded Specimen for Testing $35.00/EA
3) Preparation of Rock Core Samples for Testing $18.00/EA
B) Identification and Physical Properties
1) Visual Classification by Geotechnical/Environmental Professional $3.00/EA
2) Moisture Content Determination (ASTM D-2216) $4.00/EA
3) Unit Weight Undisturbed Sample $12.50/EA
4) Organic Content by Combustion (Loss-On-Ignition) $40.00/EA
5) pH Determination by Meter or Litmus Paper $10.00/EA
6) Atterberg Limits
a) Liquid Limit (ASTM D-423) $35.00/TEST
b) Plastic Limit (ASTM D-429) $35.00/TEST
c) Shrinkage Limit (ASTM D-427) $40.00/TEST
7) Specific Gravity (ASTM D-854) $50.00/TEST
8) Grain-Size Determination (Complete with Curve)
a) Mechanical Analysis $45.00/TEST
Including Material Passing No. 200 Sieve $55.00/TEST
b) Hydrometer Analysis $50.00/TEST
c) Mechanical and Hydrometer Analysis (ASTM D-422) $90.00/TEST
d) Material Passing No. 200 Sieve Only, No Curve (ASTM D-1140) $30.00/TEST
9) Permeability (Reactive, Corrosive or Hazardous Fluid Additional $150.00/TEST)
a) Constant Head (Granular Soil) (ASTM D-2434) $150.00/TEST
b) Constant/Falling Head (Rigid Wall Permeameter) $175.00/TEST
c) Constant/Falling Head (Flexible Wall Permeameter) $200.00/TEST
10) Moisture Density Relationship (Complete with Curve)
a) Standard Proctor (ASTM D-698/AASHTO T-99) $110.00/TEST
b) Modified Proctor (ASTM D-1557/AASHTO T-180) $120.00/TEST
c) Maximum-Minimum Relative Density (ASTM D-2049) $195.00/TEST
11) CBR or R-Value (Without Proctor or Other Associated Tests) (ASTM D-1883)/(California Test Procedure 301) $195.00/TEST

IV. SOIL LABORATORY TESTING SERVICES (continued)

C) Strength and Compressibility
- 1) Unconfined Compression
  - a) Without Controlled Strain-SPT Soil Sample $4.00/TEST
  - b) Calibrated Penetrometer Resistance (Average of 3)-Soil $3.00/TEST
  - c) Controlled Strain with Stress-Strain Curve (Undisturbed Tube Soil Sample) $45.00/TEST
  - d) Controlled Strain (No Curve) (Undisturbed Tube Soil Sample) $30.00/TEST
  - e) Without Controlled Strain-Rock $50.00/TEST
- 2) Vane-Shear, Torvane (Average of 3)-Soil $4.00/TEST
- 3) Triaxial (Including 3 Mohr Circles)-Soil
  - a) Unconsolidated-Undrained (U-U) $500.00/SET
  - b) Consolidated-Undrained (C-U) $600.00/SET
  - c) Consolidated-Drained (C-D) $700.00/SET
- 4) Direct Shear (Including 3 Points)-Soil $250.00/SET
- 5) Consolidation-Soil (Including Curve)
  - a) Conventional With Maximum 16 tsf Loading in 8 Increments and 4 Rebound Points $260.00/TEST
  - b) Additional Load Increments and Rebound Points $35.00/EA
  - c) Single Point $55.00/TEST
  - d) Collapse (Metastable Soil) $75.00/TEST
- 6) Swelling Percent and Pressure of Expansive Soils $195.00/TEST
- 7) EI (Expansive Index) Test of Expansive Soils (UBC Standard 29-2) $135.00/TEST

V. GENERAL NOTES (APPLICABLE TO ALL SERVICES)

Direct non-salary expenses for engineering and technical personnel charged at cost + 15%. Engineering services transportation time charged portal/portal and automobile travel at $0.35/mile, other modes of transportation charged at cost + 10%. Normal construction monitoring services workday 7:00 a.m. to 5:00 p.m., overtime rates (150%) applicable for services performed outside these hours, over 8 hours per day, and Saturdays, Sundays and Holidays. Minimum monitoring fee 3 hours per trip.

Personnel compensation rates for court/arbitration related services for expert consultation in accordance with the rates indicated herein, with the exception of services performed in which the individual is placed in an adversary position such as testimony or deposition which will be charged at 150% of the standard hourly rates. A minimum $1,000.00 retainer and an indemnification agreement are also typically required for these services.

Invoices submitted once a month during period of contract and/or at completion of our services. Payment is due 15 days after receipt of invoice. Invoices remaining unpaid beyond 30 days accrue interest at 12% for each month delinquent or at the maximum rate allowed by law. Reasonable attorney fees incurred to collect over due invoices will be reimbursed at cost. Litigation required to collect over due invoices will be filed in and under the laws of Waukesha County, Wisconsin.

Subsurface exploration unit rates include labor and materials incidental to usage of drilling equipment. Support services such as location and elevation surveys, clearance of utilities and permits charged at standard hourly rates and expenses at cost + 15%. Minimum drilling fee of $795.00 per project. Soil drilling and rock coring charges based on nominal auger and diamond wear. Excessive wear due to hard and/or difficult formations charged at actual cost. Drilling and coring below 80-foot depth on hourly basis or at unit price quoted upon request.

Unit prices in this proposal remain in effect for 3 months after date of proposal and subject to change without notice thereafter.

GENERAL CONDITIONS OF GEOTECHNICAL, ENVIRONMENTAL, INDUSTRIAL HYGIENE, AND/OR MATERIALS TESTING AGREEMENT
January, 2005

GILES
ENGINEERING ASSOCIATES, INC.

SECTION 1: ***FORMATION OF CONTRACT*** – These General Conditions shall be incorporated into and become a binding, integral part of any correspondence, proposal, or contract to which they are initially attached. Together they form an Agreement to be entered into by and between Giles Engineering Associates, Inc. ("Giles") and the party for whom Giles is to perform its services ("Client"). Conflicting terms or conditions that appear on an acceptance copy of any Agreement document, or subsequently issued document, are hereby objected to and shall be invalid, unless accepted in writing by all parties to the Agreement. Ordering, reliance upon, or acceptance of Giles' services by Client, including additional work orders, shall constitute Client's acceptance of the terms of the Agreement, including these General Conditions, regardless of whether Client delivers an executed copy of the Agreement document prior to the commencement of Giles' services. The Agreement, including these General Conditions, shall extend to the benefit of, and be binding upon, the successors, assigns, directors, officers, employees, agents, subcontractors, representatives, and consultants of Giles and Client. Client shall communicate these General Conditions to any third party or principal for whom, or to whom, Client conveys any part of Giles' services. Giles shall have no duty or obligation to any third party or principal greater than what is set forth herein.

SECTION 2: ***SITE ACCESS AND PROPERTY CARE*** – Client will arrange right of entry for Giles to complete the services. Client warrants and represents that it has authority and permission to grant Giles access. Client will also arrange permission for Giles to photograph the site. Client will provide Giles with sufficient documentation to enable Giles to avoid trespass and damage to on-site, neighboring, restricted, or prohibited areas. Giles will take reasonable precautions to minimize damage to the property. In the normal course of work, some damage may occur. The correction of such damage is not part of the Agreement, unless specified in the proposal. Giles will backfill borings and other types of ground penetrations. Soil backfill at access points and test locations may settle over time. Giles is not responsible for checking, maintaining, or repairing the backfill after leaving the project site.

SECTION 3: ***UTILITIES*** – Giles will contact the local one-call public utility locator service and take reasonable precautions to avoid damage or injury to identified underground structures or utilities. Client shall provide any documents necessary or helpful in locating all private underground structures and utilities. Client shall assume responsibility for the accuracy of any information provided. Client agrees to hold harmless, defend, and indemnify Giles for any damages to underground structures and utilities, and any damage, injury, or death arising directly or indirectly therefrom, which were not identified on the documents furnished, or by local utility identification agencies.

SECTION 4: ***DEGREE OF CERTAINTY IN MATERIALS TESTED*** – The locations and elevations of in-situ tests will be determined in accordance with the accuracy and proximity of survey control provided by Client or the contractor. Unless noted, locations and elevations will be determined by pacing and hand level methods. Observation and testing services will be provided in such a manner as to have reasonable certainty that the services essentially comply with project requirements.

SECTION 5: ***STANDARD OF CARE*** – Services performed under this Agreement will be conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing at this time, under similar conditions, and in the same locale. No other warranty, express or implied, is made.

SECTION 6: ***DELAY AND FORCE MAJEURE*** – Giles will be excused for delay in the performance of services under this Agreement if caused by acts of God; inclement weather; acts of utility companies, unions, organized labor, or inspectors; or other unforeseen contingencies; beyond Giles' reasonable control.

SECTION 7: ***RESPONSIBILITIES*** – The presence of Giles' field representative(s) will be for the purpose of providing observation and/or field testing. Giles' services will not include the supervision or direction of the work of the contractor or the contractor's employees or agents. Contractor should be so advised, and informed that neither the presence of Giles' field representative nor the observation and testing shall excuse contractor in any way for defects discovered in contractor's work. An opinion will be developed from observations and tests as to whether the work essentially complies with the project requirements.

SECTION 8: ***OWNERSHIP OF INSTRUMENTS OF SERVICE*** – All reports, boring logs, field data, field notes, laboratory test data, calculations, estimates and other documents prepared by Giles are instruments of service, remain the property of Giles, and are protected by copyright, trademark, and other proprietary rights provided under state and federal laws of the United States and/or foreign nations.

SECTION 9: ***DISPOSITION OF SAMPLES AND MATERIALS*** – Uncontaminated soil and rock samples will be held for thirty (30) days after submission of Giles' report, unless advised otherwise by Client. Further storage or transfer can be made at Client's written request. Should samples, materials, and/or waste by-products contain, or be suspected to contain, substances or constituents hazardous to health, safety, or the environment, as defined by applicable laws, Giles will return such samples, materials, and/or waste by-products to Client after completion of testing, or have them disposed of in accordance with applicable laws. Client agrees to pay all costs associated with the storage, transportation, and disposal. Giles is acting as a bailee and assumes no title to such samples, materials, and/or waste.

GILES ENGINEERING ASSOCIATES, INC.

SECTION 10: *SAFETY* – The construction contractor and/or owner shall, without limitation, assume sole and complete responsibility for job site conditions during construction of the project, including the safety of all persons and property.

SECTION 11: *MOLD EXCLUSION* – Unless expressly provided, Giles' scope of services does not include any investigation, analysis, consultation, or representation with respect to the risk, prevention, presence, or remediation of mold, mildew, fungi, spores, or other microbes. It is therefore agreed that Giles has no responsibility or liability for claims, damages, losses, or expenses attributable to any such exposure, contamination, growth, release, or dispersal.

SECTION 12: *HAZARDOUS MATERIALS* – When hazardous materials are known, assumed, or suspected to exist at a site, Giles will take appropriate actions to protect the health and safety of personnel, to comply with applicable laws and regulations, and to implement procedures to minimize physical risks to employees and the public. Client will inform Giles of any suspected hazardous materials. The discovery of unanticipated hazardous materials constitutes a changed condition requiring renegotiation of the scope of services or termination of the Agreement. Client agrees to compensate Giles for additional costs of working to protect employee and/or public health and safety. Client waives any claim against Giles, and agrees to hold harmless, indemnify, and defend Giles from and against any claim or liability for injury, death, or loss arising directly or indirectly from the discovery of unanticipated hazardous materials. Client also agrees to compensate Giles for time spent, and expenses incurred, in defense of any such claim, based upon Giles' prevailing fee schedule and expense reimbursement policy relative to the direct project costs.

SECTION 13: *INSURANCE* – Giles maintains a complete insurance package, including workman's compensation, commercial general liability, and professional liability insurance. Giles also maintains contractors pollution liability coverage of $2,000,000.00 for each pollution incident, with an annual aggregate limit of $2,000,000.00. Certificates of insurance shall be provided upon request.

SECTION 14: *LIMITATIONS OF LIABILITY* – Client agrees to limit Giles' total aggregate liability to Client and all construction contractors, subcontractors and those named on the project arising from Giles' professional acts, errors or omissions, or breaches of contract to the greater of either $100,000.00 or Giles' fee for services on the project.

SECTION 15: *INDEMNIFICATION* – To the fullest extent permitted by law, Client shall hold harmless, indemnify, and defend Giles from and against all claims and causes of action for bodily injury, death, and property damage that may arise from the performance of services under this Agreement, except where such bodily injury, death, or property damage arises directly from the sole negligence, errors, or omissions of Giles.

SECTION 16: *LITIGATION SUPPORT* – If Giles is required by operation of law, subpoena, or other legal process to appear, participate, or give testimony as an expert or fact witness, in any legal discovery, administrative, or court proceeding, as a result of the performance of services under this Agreement, Client agrees to compensate Giles pursuant to Giles' current fee and rate schedule, and to reimburse Giles for all reasonable costs and expenses Giles may incur in connection with such activities, including the fees of any attorney that Giles may retain on its own behalf.

SECTION 17: *INVOICES AND PAYMENT* – Payment of invoices is due upon receipt of invoice and is past due thirty (30) days from invoice date. Client agrees to pay a late payment service charge of 1½% per month, or 18% per year, for past due invoices. Client agrees the balance as stated on the invoice is correct, conclusive, and binding unless Client within ten (10) days from the date of invoice notifies Giles in writing of the item alleged to be incorrect. Should a dispute over payment arise, Client agrees to pay all invoiced amounts except those amounts in dispute; stipulates to using the Waukesha County Circuit Court, Wisconsin, as the venue; and agrees to pay all court costs and attorney fees associated with the collection of disputed sums. Attorney fees shall be at the actual cost or at Giles' in-house counsel rate of $150.00 per hour.

SECTION 18: *NOTICE OF LIEN RIGHTS* – **AS REQUIRED BY STATE CONSTRUCTION LIEN LAWS, OWNER IS HEREBY NOTIFIED THAT PERSONS OR COMPANIES FURNISHING LABOR OR MATERIALS FOR CONSTRUCTION ON OWNER'S LAND MAY HAVE LIEN RIGHTS IF NOT PAID. THOSE ENTITLED TO LIEN RIGHTS, IN ADDITION TO GILES, ARE THOSE WHO CONTRACT DIRECTLY WITH OWNER OR THOSE WHO GIVE OWNER NOTICE WITHIN SIXTY (60) DAYS AFTER THEY FIRST FURNISH PROFESSIONAL SERVICES. OWNER MAY NEED TO NOTIFY ITS MORTGAGE LENDERS OF THESE LIEN RIGHTS.**

SECTION 19: *TERMINATION* – This Agreement may be terminated by either party upon seven (7) days written notice. In the event of termination, Giles shall be paid for all services performed prior to the termination date.

SECTION 20: *GOVERNING LAW AND SURVIVAL* – The laws of the State of Wisconsin will govern the validity of these terms, their interpretation, and performance. Client consents to venue in the Waukesha County Circuit Court, State of Wisconsin, for all claims and disputes. The terms of this Agreement shall survive the completion of Giles' services.

Important Information About This Geotechnical Engineering Proposal

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

Participate in Development of the Subsurface Exploration Plan

Geotechnical engineering begins with the creation of an effective subsurface exploration plan. This proposal starts the process by presenting an initial plan. While that plan may consider the unique physical attributes of the site and the improvements you have in mind, it probably does not consider your unique goals, objectives, and risk management preferences. Subsurface exploration plans that are finalized without considering such factors presuppose that clients' needs are unimportant, or that all clients have the same needs. *Avoid the problems that can stem from such assumptions* by finalizing the plan and other scope elements directly with the geotechnical engineer you feel is best qualified for the project, along with the other project professionals whose plans are affected by the geotechnical engineer's findings and recommendations. If you have been told that this step is unnecessary; that client preferences do not influence the scope of geotechnical engineering service or that someone else can articulate your needs as well as you, you have been told wrong. No one else can discuss your geotechnical options better than an experienced geotechnical engineer, and no one else can provide the input you can. Thus, while you certainly are at liberty to accept a proposed scope "as is," recognize that it could be a unilateral scope developed without direct client/engineer discussion; that authorizing a unilateral scope will force the geotechnical engineer to accept all assumptions it contains; that assumptions create risk. *Manage your risk. Get involved.*

Expect the Unexpected

The nature of geotechnical engineering is such that planning needs to *anticipate the unexpected.* During the design phase of a project, more or deeper borings may be required, additional tests may become necessary, or someone associated with your organization may request a service that was not included in the final scope. During the construction phase, additional services may be needed to respond quickly to unanticipated conditions. In the past, geotechnical engineers commonly did whatever was required to oblige their clients' representatives and safeguard their clients' interests, taking it on faith that their clients wanted them to do so. But some, evidently, did not, and refused to pay for legitimate extras on the ground that the engineer proceeded without proper authorization, or failed to submit notice in a timely manner, or failed to provide proper documentation. *What are your preferences? Who is permitted to authorize additional geotechnical services on your project? What type of documentation do you require? To whom should it be sent? When? How?* By addressing these and similar issues sooner rather than later, you and your geotechnical engineer will be prepared for the unexpected, to help prevent molehills from growing into mountains.

Have Realistic Expectations; Apply Appropriate Preventives

The recommendations included in a geotechnical engineering report are *not final,* because they are based on opinions that can be verified only during construction. For that reason, most geotechnical engineering proposals offer the construction observation services that permit the geotechnical engineer of record to confirm that subsurface conditions are what they were expected to be, or to modify recommendations when actual conditions were not anticipated. *An offer to provide construction observation is an offer to better manage your risk.* Clients who do not take advantage of such an offer; clients who retain a second firm to observe construction, can create a high-risk "Catch-22" situation for themselves. *The geotechnical engineer of record cannot assume responsibility or liability for a report's recommendations when another firm performs the services needed to evaluate the recommendations' adequacy.* The second firm is also likely to disavow liability for the recommendations, because of the substantial and possibly uninsurable risk of assuming responsibility for services it did not perform. Recognize, too, that no firm other than the geotechnical engineer of record can possibly have as intimate an understanding of your project's geotechnical issues. As such, reliance on a second firm to perform construction observation can elevate risk still more, because its personnel may not

have the wherewithal to recognize subtle, but sometimes critically important unanticipated conditions, or to respond to them in a manner consistent with your goals, objectives, and risk management preferences.

Realize That Geoenvironmental Issues Have Not Been Covered

The equipment, techniques, and personnel used to perform a geoenvironmental study differ significantly from those used to perform a geotechnical study. *Geoenvironmental services are not being offered in this proposal. The report that results will not relate any geoenvironmental findings, conclusions, or recommendations.* Unanticipated environmental problems have led to numerous project failures. If you have not yet obtained your own geoenvironmental information, ask your geotechnical consultant for risk management guidance. *Do not rely on an environmental report prepared for someone else.*

Obtain Professional Assistance To Deal with Mold

Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts of mold from growing on indoor surfaces. To be effective, all such strategies should be devised for the express purpose of mold prevention, integrated into a comprehensive plan, and executed with diligent oversight by a professional mold prevention consultant. Because just a small amount of water or moisture can lead to the development of severe mold infestations, a number of mold prevention strategies focus on keeping building surfaces dry. While groundwater, water infiltration, and similar issues may be addressed as part of the geotechnical engineering study described in this proposal, the geotechnical engineer who would lead this project ***is not*** a mold prevention consultant; ***none of the services being offered have been designed or proposed for the purpose of mold prevention.***

Have the Geotechnical Engineer Work with Other Design Professionals and Constructors

Other design team members' misinterpretation of a geotechnical engineering report has resulted in costly problems. Manage that risk by having your geotechnical engineer confer with appropriate members of the design team before finalizing the scope of geotechnical service (as suggested above), and, again, after submitting the report. *Also retain your geotechnical engineer to review pertinent elements of the design team members' plans and specifications.*

Reduce the risk of unanticipated conditions claims that can occur when constructors misinterpret or misunderstand the purposes of a geotechnical engineering report. Use appropriate language in your contract documents. Retain your geotechnical engineer to participate in prebid and preconstruction conferences, and to perform construction observation.

Read Responsibility Provisions Closely

Clients, design professionals, and constructors who do not recognize that geotechnical engineering is far less exact than other engineering disciplines can develop unrealistic expectations. Unrealistic expectations can lead to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their proposals. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks, thus to encourage more effective scopes of service. *Read this proposal's provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Rely on Your ASFE-Member Geotechnical Engineer for Additional Assistance

Membership in ASFE/The Best People on Earth exposes geotechnical engineers to a wide array of risk management techniques that can be of genuine benefit to everyone involved with a construction project. Confer with an ASFE member geotechnical engineer for more information. Confirm a firm's membership in ASFE by contacting ASFE directly or at its website.

ASFE
The Best People on Earth
8811 Colesville Road/Suite G106, Silver Spring, MD 20910
Telephone: 301/565-2733 Facsimile: 301/589-2017
e-mail: info@asfe.org www.asfe.org

IIGEP06045.0M

BREAKDOWN OF PROPOSED FEES
ADDITIONAL GEOTECHNICAL EXPLORATION & ANALYSIS
Miller Road Reconstruction
North Barrington, Illinois
Proposal No. 1GP-080752

DESCRIPTION	ESTIMATED QUANTITY	UNIT RATE	ESTIMATED TOTAL
FIELD SERVICES			
1. Mobilization of drilling equipment	7 Rig Days	$225.00/Day	$1,575.00
2. Use of ATV Drill Rig for Site Access (if needed)	--	$375.00/day	--
3. Test Boring Location and Elevations	12 hours	$60.00/Hour	$720.00
4. Soil Borings			
a. 0 to 20 foot depth	260 LF	$9.50/LF	$2,470.00
b. 20 to 40 foot depth	260 LF	$10.20/LF	$2,652.00
c. 40 to 60 foot depth	260 LF	$10.90/LF	$2,834.00
d. 60 to 80 foot depth (if needed)	--	$13.00/LF	--
5. Additional SPT Samples	39	$10.00/Each	$390.00
6. Borehole Abandonment and surface restoration	780 LF	$1.50/LF	$1,170.00
7. Undisturbed Tube Samples	13	$40.00/Each	$520.00
8. 2½ inch diameter ring samples	--	$35.00/Each	--
9. Traffic Control	7 days	$975.00/day	$6,825.00
Estimated Fee for Field Services			**$19,156.00**
LABORATORY TESTING SERVICES			
1. Visual sample classification	195	$2.75/Each	$536.25
2. Moisture content testing	195	$3.75/Each	$731.25
3. Calibrated penetrometer testing	156	$2.75/Each	$429.00
4. Unconfined compression testing (SPT samples)	156	$3.75/Each	$585.00
5. Unconfined compression testing (Tube or ring samples)	13	$30.00/Each	$390.00
6. Consolidation Testing	--	$260.00/Each	--
7. Direct Shear Strength Testing	--	$250.00/Each	--
8. Atterberg LimitsTests	--	$70.00/Each	--
Estimated Fee for Laboratory Testing Services			**$2,671.50**
ENGINEERING SERVICES			
1. Geotechnical Division Manager	10 Hours	$120.00/Hour	$1,200.00
2. Sr. Project Manager	60 Hours	$110.00/Hour	$6,600.00
Estimated Fee for Engineering Services			**$7,800.00**
TOTAL ESTIMATED COST			**$29,627.50**
Additional 60 foot test borings (if needed):			**$1,200.00/Boring**

1GP-080752-fee/08prop/geo/pjg

HOWARD SURVEYING COMPANY, INC.
ILLINOIS AND WISCONSIN LAND SURVEYORS
37164 N. GREEN BAY ROAD BEACH PARK, ILLINOIS 60087
PH (847) 336-7780 FAX (847) 336-7785 EMAIL-PLSLAND@AOL.COM

August 8, 2008

Ms. Joyce DeLong, P.E.
Applied Technologies, Inc.
600 North Milwaukee Avenue, Suite E
Lake Villa, IL 60046

Re: Proposal for checking existing conditions along Miller Road from Station 85+90 to 109+00

Dear Joyce:

After reviewing the email you sent and our office records in the area we herewith submit our proposal in the amount of $3,200.00 for the above described survey broken down as follows:

Provide visual check of existing Miller Road from Station 85+90 to Station 103+30 to look for any changes from the previous survey. Also check existing bench mark and existing pavement grades, culverts and utilities for any changes from the previous survey and locate the wetland areas along Miller Road as flagged by others.

We would be able to start the survey immediately and have the survey ready within approximately 1 to 2 weeks (weather permitting) from date of approval of this proposal.
This proposal will be honored for 30 days from the date hereon.

Thank you for giving us the opportunity to be of service to you. If you should have any questions with regard to this proposal, please do not hesitate to call.

Sincerely,

HOWARD SURVEYING CO., INC.

Douglas L. Howard PLS

Accepted by: _____

Date: _____

SURVEY PROCEDURES (Revised 4/21/08)

UNITS-COORDINATES

The CONSULTANT will conduct all surveying, stationing, and preparation of required plans using English units of measure and the U.S. Survey Foot. State Plane Coordinates – Illinois East Zone, NAD 83 shall be obtained for all alignment and survey control points.

HORIZONTAL ALIGNMENT

Unless otherwise specified in the services contract, the CONSULTANT is to provide the horizontal alignment. The CONSULTANT'S SURVEYOR will try to re-establish the original horizontal alignment as shown on the recorded R.O.W. plats. The CONSULTANT shall contact LCDOT's Land Surveyor to obtain R.O.W. plats and field notes and benchmarks before establishing the horizontal alignment and stationing. Notify LCDOT's Surveyor immediately if the alignment cannot be reproduced or if in the CONSULTANT'S opinion the existing alignment information is in error.

The CONSULTANT'S SURVEYOR, prior to construction, shall stake the PCs, PIs, PTs, and POTs so that LCDOT's Surveyor can locate them later for construction staking. The CONSULTANT'S SURVEYOR will provide four reference ties to all U.S. Public Land Survey Monuments located within the construction limits. The reference points should be located outside of the anticipated construction limits if practical, so that they can be used after construction to replace the monuments. The CONSULTANT shall record Monument Records for all Section and Quarter Section corners set or found within the construction limits.

The CONSULTANT will mark all 100-foot interval station locations on the survey base line for construction, when on paved surfaces with a P.K. or Mag nail and spray paint. The baseline for relocated alignments when off pavement will be marked at 100-foot intervals with iron rods. The rods shall be set one foot below the surface in farmed land. The CONSULTANT will advise the County of any pavement alignment variations. In cases where the proposed centerline of construction or survey baseline is different from the existing centerline of R.O.W., both shall be shown and the relationship between them will be indicated on the Alignment and Tie sheet.

An Alignment and Tie Sheet shall be provided as part of the final product. The Alignment and Tie sheet shall be signed and sealed by the CONSULTANT'S SURVEYOR. The station, offset and coordinates of the alignment points and survey control points shall be shown. It shall be noted whether the coordinates, stationing and distances are State Plane grid or ground surface. In the case that the information shown is ground surface distances, the State Plane Coordinates still must also be shown for all alignment points and survey control points in order that they can be located with GPS and so that the project can be referenced into our GIS maps. The coordinates may be

shown in a separate table. In either case the grid (combination) factor must also be shown.

VERTICAL ALIGNMENT

Vertical control for the project shall be based on NGVD 29 or NAVD 88 benchmarks. Indicate on the plans which Datum is used. NGVD 29 Lake County Mapping Benchmarks are preferred (http://gis.lakeco.org/maps/). LCDOT's Land Surveyor may also be contacted for benchmarks that may be in the area. The controlling benchmarks and the site benchmarks shall be described on the plans. Site benchmarks are to be located at less than 1000-foot intervals with a minimum of two (2) on each project.

All benchmarks will be located on stable objects. LCDOT prefers these objects to be outside the construction site. Some acceptable benchmark examples are, spikes in poles, bolts on fire hydrant rings, and concrete foundations. LCDOT's surveyor can be contacted for benchmarks that may be in the area.

TOPOGRAPHY

The CONSULTANT shall cut cross sections at 50-foot intervals in urban areas (100-foot intervals in rural areas) and at all points needing clarification. The cross section interval should be defined in the engineering services contract.

Full cross-section profiles will be taken at all cross streets, alleys, cross road culverts, and entrances (commercial, private and field). Half cross-sections will not be accepted because they skew the computer terrain model.

The CONSULTANT will locate and identify all trees (6 inches in diameter or greater) within the area either side of the centerline, defined by the proposed ROW or construction limits (whichever is greater) plus an additional 10 feet. The trees shall be identified by species and size. The trees shall be located by station/offset and have a ground elevation.

Streams, tributaries or major drainage ditches located within a lateral distance of 250 feet from centerline (upstream and downstream) shall be surveyed. Alignment, profiles and cross sections will be taken. The stream width shall be shown as the distance measured between the tops of the stream banks. Profile elevations along the bottom of the watercourse shall be taken at a minimum of 50-foot intervals.

The survey shall extend a minimum of 200 feet beyond the roadway construction limits. Cross sections shall be taken a minimum of 10 feet beyond the proposed ROW or construction limits (whichever is greater). Cross sections will extend 30 feet beyond the proposed R.O.W. at entrances 150 feet at minor side roads.

The collected survey data for the existing topography shall have a minimum of 3rd Order Accuracy horizontally with readings to the nearest 0.1 feet for vertical on gravel or ground and readings to the nearest 0.01 feet for vertical on all other surfaces.

RAILROAD INSURANCE

The CONSULTANT will comply with the railroad's requirements when conducting a survey on the railroad's ROW. Usually this includes obtaining a permit, paying a fee, obtaining Railroad Protective Liability Insurance, notification of a flagman to be present near the rails during the survey operations and any other requirements of the railroad. The CONSULTANT is responsible for all of the foregoing requirements.

DELIVERABLES

I. Copies from the CONSULTANT'S field books, showing benchmarks, level circuits, & structure details, such as size and inverts etc.

II. Base Drawing at 1:1. All the topographic information shall be plotted electronically. The data shall be recorded in a MICROSTATION .DGN format. All line work defining different elements shall be completed using LCDOT's CELL and LINE LIBRARIES (see attachment). ASCII files containing all point information as described below shall be included. Backup CD's or diskettes shall be provided.

III. SUMMARY SHEETS showing:

(1) Point number
(2) Point identification by code and description
(3) Station
(4) Distance offset (right or left)
(5) Northing and Easting coordinate values
(6) "Z" elevations

* Four computer printouts shall be provided:

1. List of points referenced by stations.
2. List of points referenced by sequential point numbering.
3. List of points sorted by point identification.
4. "ID" acronym explanation sheets.

An example showing the different printouts is shown on the next page.